Montana State Library
Records Digitization Project
COVER SHEET

This page is not part of the original document
and was inserted for formatting purposes

S
31.22
1miwr 2000
.1

Montana

Informational Wage Rates by Occupation for 1998

Includes Statewide, U.S. and Metropolitan Statistical Areas

Published March 2000
Office of Research and Analysis, Job Service Division
Montana Department of Labor and Industry

MONTANA STATE LIBRARY
3 0864 0016 1417 4

The Montana State Job Service Division maintains 23 local Job Service Centers in principal cities of Montana. You are invited to call on any of these offices for assistance in filling positions in your organization, obtaining additional labor market information and for receiving other services in connection with your employment needs.

LOCAL JOB SERVICE CENTER LISTING

ANACONDA
307 East Park
Anaconda, MT 59711
(406-563-3444)

BILLINGS
2121-B Rosebud Dr.
Billings, MT 59102
(406-652-3080)

BOZEMAN
121 N. Willson
Bozeman, MT 59715
(406-582-9200)

BUTTE
2201 White Blvd.
Butte, MT 59702
(406-494-0300)

CUT BANK
1210 E. Main
Cut Bank, MT 59427
(406-873-2191)

DILLON
730 N. Montana
P.O. Box 1300
Dillon, MT 59725
(406-683-4259)

FLATHEAD
427 1st Ave. E.
Kalispell, MT 59901
(406-758-6200)

NORTHEAST MONTANA
JOB SERVICE
238 2nd Ave. S.
Glasgow, MT 59230
(406-228-9369)

GLENDIVE
211 S. Kendrick
Glendive, MT 59330
(406-365-3314)

GREAT FALLS
1018 7th St. S.
Great Falls, MT 59405
(406-791-5800)

BITTERROOT
333 W. Main St.
Hamilton, MT 59840
(406-363-1822)

HAVRE
160 1st Ave.
Havre, MT 59501
(406-265-5847)

HELENA
715 Front St.
P.O. Box 201505
Helena, MT 59620-1505
(406-447-3200)

LEWISTOWN
300 1st Ave. N.
Lewistown, MT 59457
(406-538-8701)

LIBBY
417 Mineral Ave./Suite 4
Libby, MT 59923
(406-293-6282)

LIVINGSTON
220 E. Park
P.O. Box 1199
Livingston, MT 59047
(406-222-0520)

MILES CITY
12 N. 10th St.
P.O. Box 1786
Miles City, MT 59301
(406-232-8340)

MISSOULA
539 S. 3rd St. W.
P.O. Box 5027
Missoula, MT 59806
(406-728-7060)

LAKE COUNTYJOB
SERVICE CENTER
417-B Main St.
P.O. Box 970
Polson, MT 59860
(406-883-5261)

SHELBY
402 1st St. S.
Shelby, MT 59474
(406-434-5161)

SIDNEY
211 N. Central
Sidney, MT 59270
(406-482-1204)

SANDERS COUNTY JOB
SERVICE CENTER
608 Main St.
P.O. Box 669
Thompson Falls, MT 59873
(406-827-3472)

NORTHEAST MONTANA
JOB SERVICE
217 3rd Ave. S.
Wolf Point, MT 59201
(406-653-1720)

Montana Informational Wage Rates by Occupation for 1998

State of Montana
Marc Racicot, Governor
Department of Labor & Industry
Pat Haffey, Commissioner

For more information contact:
Office of Research & Analysis, Job Service Division
Department of Labor & Industry
1301 Lockey Ave.
P. O. Box 1728
Helena, Montana 59624-1728
406-444-2430
FAX 406-444-2638
Toll free within Montana 800-633-0229
Toll free outside Montana 800-541-3904
TDD 406-444-0532
Also on the Internet at:
http://rad.dli.state.mt.us/

As always, the Office of Research and Analysis welcomes questions, comments and suggestions from the public. In addition, we'll do our best to provide information in accessible format, on request, in compliance with the Americans with Disabilities Act.

A sincere thank you is extended to: The many public and private organizations across Montana which took part in this survey; the Office of Research and Analysis staff who helped with this project: Casey Greenwood, Tina Hash, Roy Hinman, Julie Huntington, Kate Kahle, Michelle McFarland, Bob Schleicher and Cathy Shenkle.

Bob Rafferty, Director
Office of Research and Analysis
Job Service Division
Montana Department of Labor and Industry

This publication contains wage rates for the U.S., Montana, and Cascade and Yellowstone County Metropolitan Statistical Areas (MSAs). A Metropolitan Statistical Area (MSA), as determined by the Office of Management and Budget, must have a central city with a population of 50,000 or more. The Cascade County MSA includes Great Falls and Cascade County is located in central Montana. The Yellowstone County MSA includes Billings and Yellowstone County is located in south central Montana. This is the second year wage rates are available for the Cascade and Yellowstone County MSAs.

Publication users will notice some jobs have wage rates for only certain areas. Wages rates for other areas are not available for those particular jobs. No other county level wage data is available for Montana. The wages contained in this publication cannot be used for Montana Prevailing Wage or Alien Labor Certification purposes.

Table of Contents

General Information

Alphabetical Index of Occupations.....i

Introduction.....1

Occupations

Wage Rate Information by Occupational Titles and Codes.....3

Occupational Codes and Descriptions 53

Other Information

Appendix.....80

Wage Conversion Table.....81

Survey Methodology.....83

Alphabetical Listing of Occupations

	Page
Accountants & auditors	5
Adjudicators, hearings officers & judicial reviewers	11
Adjustment clerks	23
Administrative services managers	3
Advertising clerks	24
Agricultural & food scientists	9
Aircraft mechanics	37
Aircraft pilots & flight engineers	49
Airplane dispatchers & air traffic controllers	19
All other agricultural, forestry, fishing & related workers	34
All other cleaning & building service workers	32
All other clerical & administrative support workers	28
All other communications equipment mechanics, installers & repairers	37
All other computer scientists	10
All other construction & extractive workers, except helpers	42
All other construction trades workers	41
All other electrical & electronic equipment mechanics, installers & repairers	38
All other engineering & related technicians & technologists	8
All other engineers	7
All other financial specialists	5
All other first-line supervisors & managers/ supervisors-production, construction, maintenance & related workers	35
All other food service workers	31
All other freight, stock, and material movers, hand	51
All other hand workers	47
All other health diagnosing & treating practitioners	15
All other health professionals, paraprofessionals & technicians	18
All other health service workers	32
All other helpers, laborers & material movers, hand	52
All other legal assistants & technicians, except clerical	12
All other machine operators & tenders	46
All other machinery maintenance mechanics	36
All other management support workers	6
All other managers & administrators	5
All other material recording, scheduling & distributing workers	28
All other material-moving equipment operators	50
All other mechanics, installers & repairers	39
All other metal & plastic cutting, forming, fabricating or processing machine operators & tenders	44
All other motor vehicle operators	49
All other office machine operators	27
All other physical & life science technicians & technologists	9
All other physical sciences teachers, postsecondary	12
All other physical scientists	9
All other plant & system operators	48
All other postsecondary teachers	13
All other precision metal workers	42
All other precision workers	43
All other professional, paraprofessional & technical workers	19
All other protective service workers	29
All other sales & related workers	22
All other sales representatives & salespersons, services	21
All other service workers	33
All other social scientists	10
All other supervisors & managers/supervisors-service workers	28
All other teachers & instructors	14
All other therapists	16
All other timber cutting & related logging workers	34
All other transportation & material-moving equipment operators	50
All other transportation & related workers	49
Amusement & recreation attendants	32
Animal caretakers, except farm	34
Announcers, radio/television	18
Anthropology and sociology teachers, postsecondary	12
Appraisers, real estate	20
Architects, except landscape & marine	7
Art, drama & music teachers, postsecondary	12
Artists & related workers	18
Assemblers & fabricators, except machine, electrical, electronic & precision	47
Atmospheric & space scientists	8
Automotive body & related repairers	36
Automotive mechanics	36
Auxiliary equipment operators, power	48
Baggage porters & bellhops	33
Bailiffs	29
Bakers, bread & pastry	30
Bartenders	30
Bicycle repairers	39
Bill & account collectors	23
Billing, cost & rate clerks	26
Billing, posting & calculating machine operators	26
Bindery machine operators & tenders	45
Bindery machine setters & set-up operators	44
Biological scientists	9

Alphabetical Listing of Occupations

	Page
Biological, agricultural & food technicians & technologists, except health	9
Blasters & explosives workers	41
Boiler operators & tenders, low pressure	45
Boilermakers	42
Bookkeeping, accounting & auditing clerks	26
Brickmasons	39
Broadcast news analysts	18
Broadcast technicians	18
Brokerage clerks	23
Brokers, real estate	20
Budget analysts	5
Bus & truck mechanics & diesel engine specialists	36
Bus drivers, except school	48
Bus drivers, school	48
Business teachers, postsecondary	13
Butchers & meat cutters	30
Cabinetmakers & bench carpenters	42
Camera operators, television & motion picture	18
Cardiology technologists	17
Carpenters	39
Carpet installers	40
Cashiers	21
Cementing & gluing machine operators & tenders	46
Central office & PBX installers & repairers	37
Chemical engineers	7
Chemical technicians & technologists, except health	9
Chemists, except biochemists	8
Child care workers	33
Choke setters	33
Civil engineering technicians & technologists	8
Civil engineers, including traffic	7
Claims examiners, property & casualty insurance	6
Cleaning, washing & pickling equipment operators & tenders	46
Clergy	11
Coating, painting & spraying machine operators & tenders	46
Coin & vending machine servicers & repairers	39
Combined food preparation & service workers	31
Communications, transportation & utilities operations managers	4
Computer engineers	7
Computer operators, except peripheral equipment	26
Computer programmer aides	10
Computer programmers	10
Computer science teachers, postsecondary	12
Computer support specialists	9
Concrete & terrazzo finishers	40
Construction & building inspectors	6
Construction managers	4
Conveyor operators & tenders	50
Cooks, fast food	31
Cooks, institution or cafeteria	30
Cooks, restaurant	30
Cooks, short order	31
Cost estimators	6
Counter & rental clerks	21
Counter attendants-lunchroom, coffee shop or cafeteria	30
Court clerks	23
Crane & tower operators	50
Credit analysts	5
Credit checkers	22
Criminal investigators, public service	29
Crossing guards	29
Crushing, grinding, mixing & blending machine operators & tenders	46
Curators, archivists, museum technicians & conservators	14
Custom tailors & sewers	42
Customer service representatives, utilities	25
Cutters & trimmers, hand	47
Cutting & slicing machine operators & tenders	45
Data entry keyers, except composing	26
Data processing equipment repairers	37
Database administrators	9
Demonstrators & promoters	22
Dental assistants	31
Dental hygienists	17
Dentists	15
Derrick operators, oil & gas extraction	41
Designers, except interior designers	19
Detectives & investigators, except public	29
Dietetic technicians	16
Dietitians & nutritionists	16
Dining room & cafeteria attendants & bartender helpers	30
Directors, religious activities & education	11
Dispatchers, except police, fire & ambulance	27
Dispatchers, police, fire & ambulance	27
Drafters	8
Dragline operators	49
Driver/sales workers	48
Drywall installers	39
Duplicating machine operators	26
Earth drillers, except oil & gas	41
Economists, including market research analysts	10
Education administrators	3
Education teachers, postsecondary	13
Electric home appliance & power tool repairers	37
Electric meter installers & repairers	38

Alphabetical Listing of Occupations

Page

Electrical & electronic engineers 7
Electrical & electronic equipment assemblers, precision 46
Electrical & electronic technicians & technologists 8
Electrical installers & repairers, transportation equipment 38
Electrical power-line installers & repairers 38
Electricians 39
Electromedical & biomedical equipment repairers 38
Electronic home entertainment equipment repairers 37
Electronic pagination system operators 43
Electronics repairers, commercial & industrial equipment 37
Emergency medical technicians 16
Employment interviewers, private or public employment service 6
Engineering, mathematical & natural sciences managers 3
English language & literature teachers, postsecondary 12
Excavating & loading machine operators 49
Extruding, forming, pressing & compacting machine operators & tenders 46
Extruding, forming, pressing & compacting machine setters & set-up operators 46
Fabric & apparel patternmakers & layout workers 42
Fallers & buckers 33
Farm equipment mechanics 37
Fence erectors 41
File clerks 25
Financial analysts, statistical 10
Financial managers 3
Fire fighting & prevention supervisors 28
Firefighters 28
First-line supervisors & managers/supervisors-agricultural, forestry, fishing & related workers 33
First-line supervisors & managers/supervisors-clerical & administrative support workers 22
First-line supervisors & managers/supervisors-construction trades & extractive workers 35
First-line supervisors & managers/supervisors-helpers, laborers & material-movers, hand 35
First-line supervisors & managers/supervisors-mechanics, installers & repairers 34
First-line supervisors & managers/supervisors-production & operating workers 35
First-line supervisors & managers/supervisors-sales & related workers 20
First-line supervisors & managers/supervisors-transportation & material-moving machine & vehicle operators 35

Page

Food preparation workers 31
Food servers, outside 30
Food service & lodging managers 4
Forest/conservation workers 34
Foresters & conservation scientists 9
Funeral attendants 33
Funeral directors & morticians 19
Furnace, kiln, oven, drier, or kettle operators & tenders 45
Furniture finishers 42
Gas appliance repairers 39
Gas compressor operators 49
Gaugers 48
General managers & top executives 4
General office clerks 26
Geologists, geophysicists & oceanographers 8
Glaziers 41
Grader, bulldozer & scraper operators 50
Grinding & polishing workers, hand 47
Guards & watch guards 29
Guides 32
Hairdressers, hairstylists & cosmetologists 32
Hand packers & packagers 52
Hazardous materials removal workers 40
Head sawyers 44
Heating, air conditioning & refrigeration mechanics & installers 38
Helpers, all other construction trades workers 51
Helpers, brick & stonemasons & hard tile setters 50
Helpers, carpenters & related workers 51
Helpers, electricians & power-line transmission installers 51
Helpers, extractive workers 51
Helpers, mechanics & repairers 50
Helpers, painters, paperhangers, plasterers & stucco masons 51
Helpers, plumbers, pipefitters & steamfitters 51
Helpers, roofers 51
Highway maintenance workers 40
History teachers, postsecondary 12
Home health aides 31
Hosts & hostesses, restaurant, lounge or coffee shop 29
Hotel desk clerks 24
Housekeeping supervisors 28
Human services workers 11
Industrial engineers, except safety 7
Industrial production managers 4
Industrial truck & tractor operators 50
Installers & repairers, manufactured buildings, mobile homes & travel trailers 38
Instructional coordinators 14

Alphabetical Listing of Occupations

Page

Instructors & coaches, sports & physical training 14
Instructors, nonvocational education 14
Insulation workers 40
Insurance adjusters, examiners & investigators 23
Insurance claims clerks 23
Insurance policy processing clerks 23
Insurance underwriters 5
Interior designers 19
Interviewing clerks, except personnel & social welfare 25
Janitors & cleaners, except maids & housekeeping cleaners 32
Jewelers & silversmiths 42
Judges & magistrates 11
Laborers, landscaping & groundskeeping 34
Landscape architects 7
Laundry & dry-cleaning machine operators & tenders, except pressing 45
Law clerks 11
Lawyers 11
Legal secretaries 24
Librarians, professional 14
Library assistants & bookmobile drivers 24
Licensed practical nurses 16
Loan & credit clerks 22
Loan interviewers 22
Loan officers & counselors 5
Locomotive engineers 49
Log graders & scalers 34
Logging tractor operators 34
Log-handling equipment operators 33
Machine feeders & offbearers 51
Machine forming operators & tenders, metal & plastic 43
Machine tool cutting operators & tenders, metal & plastic 43
Machinery maintenance mechanics 35
Machinery maintenance mechanics, water or power generation plant 35
Machinery maintenance workers 36
Machinists 42
Maids & housekeeping cleaners 32
Mail clerks, except mail machine operators & postal service 27
Mail machine operators, preparation & handling 26
Maintenance repairers, general utility 36
Management analysts 6
Marketing, advertising & public relations managers ... 3
Mathematical science teachers, postsecondary 12
Meat, poultry & fish cutters & trimmers, hand 47
Mechanical control & valve installers & repairers 38

Page

Mechanical engineering technicians & technologists ... 8
Mechanical engineers 7
Medical & clinical laboratory technicians 17
Medical & clinical laboratory technologists 17
Medical assistants 31
Medical records technicians 17
Medical secretaries 24
Medicine & health services managers 4
Menders, garments, linens & related 39
Merchandise displayers & window trimmers 19
Messengers 27
Metal fabricators, structural metal products 44
Metal pourers & casters, basic shapes 47
Meter readers, utilities 27
Millwrights 36
Mining engineers, including mine safety 6
Mining, quarrying & oil-gas well drilling managers ... 4
Mobile heavy equipment mechanics, except engines .. 36
Motion picture projectionists 45
Motorcycle repairers 36
Municipal clerks 23
Music directors, singers, composers & related workers 19
Musicians, instrumental 19
New accounts clerks 22
Nuclear medicine technologists 17
Nursing aides, orderlies & attendants 31
Nursing instructors, postsecondary 12
Occupational therapists 15
Occupational therapy assistants & aides 32
Office machine & cash register servicers 38
Offset lithographic press setters & set-up operators ... 44
Operating engineers 50
Operations & systems researchers & analysts, except computer 10
Opticians, dispensing & measuring 16
Optometrists 15
Order clerks, materials, merchandise & service 25
Order fillers, wholesale & retail sales 28
Packaging & filling machine operators & tenders 46
Painters & paperhangers, construction & maintenance 40
Painters, transportation equipment 46
Painting, coating & decorating workers, hand 47
Paralegal personnel 12
Parking enforcement officers 29
Parking lot attendants 49
Paste-up workers 43
Paving, surfacing & tamping equipment operators ... 40
Payroll & timekeeping clerks 26
Peripheral EDP equipment operators 26

Alphabetical Listing of Occupations

	Page
Personal and home care aides	33
Personnel clerks, except payroll & timekeeping	25
Personnel, training & labor relations managers	3
Personnel, training & labor relations specialists	6
Pest controllers & assistants	32
Petroleum engineers	7
Petroleum technicians & technologists	9
Pharmacists	16
Pharmacy technicians & aides	16
Photographers	18
Photographic processing machine operators & tenders	45
Physical & corrective therapy assistants & aides	32
Physical therapists	15
Physicians & surgeons	15
Physician's assistants	16
Pipelayers	40
Plastic molding & casting machine operators & tenders	44
Plumbers, pipefitters & steamfitters	40
Police & detective supervisors	28
Police detectives	29
Police patrol officers	29
Postal mail carriers	27
Postmasters and mail superintendents	3
Power distributors & dispatchers	48
Precision dental laboratory technicians	43
Precision detail design decorators & painters	43
Precision inspectors, testers & graders	35
Precision instrument repairers	38
Precision molders, shapers, casters & carvers, except jewelry & foundry	43
Precision photographic process workers	43
Pressers, hand	47
Pressing machine operators & tenders, textile, garment & related materials	45
Printing press machine operators & tenders	45
Procurement clerks	25
Producers, directors, actors & other entertainers	19
Production inspectors, testers, graders, sorters, samplers & weighers	35
Production, planning & expediting clerks	27
Property & real estate managers & administrators	4
Psychiatric technicians	17
Psychologists	10
Public administration chief executives, legislators & general administrators	4
Public relations specialists & publicity writers	18
Pump operators	50
Purchasing agents & buyers, farm products	6
Purchasing agents, except wholesale, retail & farm products	6
Purchasing managers	3
Radiation therapists	17
Radio mechanics	37
Radio operators	19
Radiologic technologists	17
Rail yard engineers, dinkey operators & hostlers	49
Rail-track laying & maintenance equipment operators	40
Real estate clerks	24
Receptionists & information clerks	25
Recreation workers	11
Recreational therapists	15
Refuse & recyclable material collectors	51
Registered nurses	16
Reporters & correspondents	18
Reservation & transportation ticket agents	24
Residential counselors	11
Respiratory therapists	15
Roofers	41
Rotary drill operators, oil & gas extraction	41
Roustabouts	41
Safety engineers, except mining	7
Sales agents & placers, insurance	20
Sales agents, advertising	20
Sales agents, real estate	20
Sales agents, securities, commodities & financial services	20
Sales agents, selected business services	20
Sales representatives, except retail & scientific & related products & services	21
Sales representatives, scientific & related products & services, except retail	21
Salespersons, parts	21
Salespersons, retail	21
Sawing machine operators & tenders	44
Sawing machine setters & set-up operators	44
Screen printing machine setters & set-up operators	44
Secretaries, except legal & medical	24
Separating, filtering, clarifying, precipitating & still machine operators & tenders	46
Septic tank servicers & sewer pipe cleaners	40
Service station attendants	49
Service unit operators	41
Sewing machine operators, garment	45
Sewing machine operators, nongarment	45
Sheet metal duct installers	41
Sheet metal workers	42
Sheriffs & deputy sheriffs	29
Shipping, receiving & traffic clerks	28

Alphabetical Listing of Occupations

	Page
Slaughterers & butchers	43
Small engine specialists	37
Social work teachers, postsecondary	13
Social workers, except medical & psychiatric	11
Social workers, medical & psychiatric	10
Special agents, insurance	6
Speech-language pathologists & audiologists	15
Sprayers/applicators	34
Statement clerks	23
Station installers & repairers, telephone	38
Stationary engineers	48
Statistical clerks	25
Statisticians	10
Stenographers and/or court reporters	24
Stock clerks, sales floor	21
Stock clerks-stockroom, warehouse or storage yard	28
Structural metal workers	41
Surgical technologists & technicians	17
Surveying & mapping technicians	8
Surveyors & mapping scientists	8
Switchboard operators	27
Systems analysts, electronic data processing	9
Tax preparers	5
Taxi drivers & chauffeurs	48
Teacher aides & educational assistants, clerical	24
Teacher aides, paraprofessional	14
Teachers & instructors, vocational education & training	13
Teachers, elementary school	13
Teachers, kindergarten	13
Teachers, preschool	13
Teachers, secondary school	13
Teachers, special education	13
Technical assistants, library	14
Technical writers & editors	18
Telemarketers, door-to-door sales workers, news & street vendors & other related workers	21
Telephone & cable television line installers & repairers	37
Tellers	22
Tire repairers & changers	39
Title examiners & abstractors	12
Title searchers	12
Tool grinders, filers, sharpeners & other precision grinders	42
Transportation agents	27
Travel agents	20
Travel clerks	23
Truck drivers, heavy or tractor trailer	48
Truck drivers, light, include delivery & route workers	48
Typesetting & composing machine operators & tenders	44
Typists, including word processing	25
Upholsterers	43
Urban & regional planners	10
Ushers, lobby attendants & ticket takers	33
Vehicle washers & equipment cleaners	52
Veterinarians & veterinary inspectors	15
Veterinary assistants	34
Veterinary technicians & technologists	17
Vocational & educational counselors	14
Waiters & waitresses	30
Water & liquid waste treatment plant & system operators	47
Weighers, measurers, checkers & samplers, recordkeeping	27
Welders & cutters	47
Welding machine operators & tenders	43
Wellhead pumpers	49
Wholesale & retail buyers, except farm products	5
Wood machinists	42
Woodworking machine operators & tenders, except sawing	44
Woodworking machine setters & set-up operators, except sawing	44
Writers & editors	18

Introduction

The Occupational Employment Statistics (OES) wage survey is an annual mail survey that measures occupational employment and wage rates for wage and salary workers in nonfarm establishments covered by unemployment insurance.

Occupational wage information is useful in business, educational and personal career planning:

- Montana employers use the information to determine wages and benefits they offer their employees.
- Out-of-state firms need to know what they need to pay employees if they relocate to Montana.
- Educational planners use the information for planning curriculums.
- School counselors use the information in career counseling.
- Individuals want to know what they should expect to be paid for work in a specific occupation.

The survey is conducted to help meet the need for standard local and national wage information. The Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) provide funding for the survey. BLS provides the procedures and technical support. Each state collects its own data.

The OES wage survey data presented in this publication has a fourth-quarter 1998 reference period and is based on information collected during the 1996, 1997 and 1998 surveys. The three years of sample responses for employment and wage data has been combined to produce these results. The 1996 and 1997 wage data has been adjusted to the 1998 reference period by using the over-the-year wage change in the most applicable Employment Cost Index series.

Information is collected and presented for all industries. The OES categorizes workers into 750 detailed occupations, although all 750 occupations may not be represented for Montana. The survey excludes the self-employed, owners/partners of unincorporated firms and unpaid family workers. Employees are reported in the occupation in which they are working—not necessarily that for which they were trained. Wages for the OES survey are straight-time, gross pay, and do ***not*** include any of the following:

- back pay
- jury duty pay
- overtime pay
- severance pay
- shift differentials
- nonproduction bonuses
- tuition reimbursements
- premium pay which includes the following types of pay:
  - base rate
  - cost of living allowances
  - guaranteed pay
  - hazardous-duty pay
  - incentive pay (includes commissions/production bonuses)
  - on-call pay

Wage rates shown were compiled for Montana using a national survey system. No differentiation was made between union and nonunion, full time or part time, or between public and private employee wages. Reported average wages include wages paid to both entry and experienced workers. Comparisons with previous surveys may not be appropriate because of changes in data collection methodology.

Wages printed in this publication *cannot* be used for alien labor certification or prevailing wage purposes, or in place of any other official wage program. Some workers in some occupations must be paid prevailing wage rates when involved with public works contracts. *Official prevailing wage rates can be obtained from the Montana Department of Labor and Industry's Office of Research and Analysis at any of the telephone numbers listed in the front of this publication or at our website at* **http://rad.dli.state.mt.us/**.

Employers were asked to report wages by occupation for each individual employee. The 11 wage ranges are shown below:

	A	B	C	D	E	F	G	H	I	J	K
Hourly	Under $6.75	$6.75-$8.49	$8.50-$9.99	$10.00-$11.24	$11.25-$13.24	$13.25-$15.74	$15.75-$19.24	$19.25-$24.24	$24.25-$43.24	$43.25-$60.00	$60.01 and over
Annual	Under $14,040	$14,040-$17,659	$17,660-$20,779	$20,780-$23,399	$23,400-$27,559	$27,560-$32,759	$32,760-$40,039	$40,040-$50,439	$50,440-$89,959	$89,960-$124,820	$124,821 and over

Please keep the following definitions in mind when reviewing the published wage rates:

- **Mean Wage**: A measure of central tendency. The sum of all values of all observations divided by the number of observations. It is also called the arithmetic average. If some values are far removed from the others (outlying), they can substantially influence the mean wage.

- **Median Wage**: Middle value when wages are arranged in order of increasing magnitude. One half of the wages are above, and one half of the wages are below the median wage.

- **Middle Range**: Lower bound is the 25th percentile value and higher bound is the 75th percentile value when wages are arranged in order of increasing magnitude. For the lower bound, one quarter of the wages are below, and three quarters of the wages are above the 25th percentile value. For the higher bound, three quarters of the wages are below, and one quarter of the wages are above the 75th percentile value.

- **Annual Average**: Annual average wages are the mean or average wages on an annualized basis.

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Managerial & Administrative Occupations					
Financial managers					
13002	U.S.	28.56	26.48	18.39 – 40.29	59,400
	Montana	24.10	22.33	17.22 – 32.34	50,140
	Yellowstone County MSA	23.89	20.75	15.56 – 32.38	49,680
	Cascade County MSA	23.97	22.33	19.48 – 25.43	49,860
Personnel, training & labor relations managers					
13005	U.S.	25.10	23.56	17.02 – 35.49	52,210
	Montana	22.01	20.45	15.76 – 26.41	45,790
	Yellowstone County MSA	19.92	18.11	14.80 – 24.05	41,430
	Cascade County MSA	22.40	21.90	17.25 – 28.46	46,590
Purchasing managers					
13008	U.S.	22.39	20.11	14.39 – 30.54	46,560
	Montana	18.47	18.07	14.14 – 21.56	38,420
	Yellowstone County MSA	20.44	19.55	16.78 – 23.04	42,520
Marketing, advertising & public relations managers					
13011	U.S.	28.85	27.55	18.38 – 40.84	60,020
	Montana	22.81	20.93	15.85 – 29.98	47,450
	Yellowstone County MSA	22.40	21.52	16.89 – 25.86	46,580
	Cascade County MSA	22.44	20.86	14.63 – 30.62	46,680
Administrative services managers					
13014	U.S.	23.70	21.33	15.37 – 33.10	49,290
	Montana	19.38	17.52	12.75 – 23.86	40,320
	Yellowstone County MSA	21.52	19.26	15.34 – 25.00	44,760
	Cascade County MSA	19.60	17.50	15.27 – 23.16	40,770
Engineering, mathematical & natural sciences managers					
13017	U.S.	34.54	36.22	27.70 – 45.41	71,850
	Montana	28.58	28.43	22.12 – 38.12	59,450
	Yellowstone County MSA	32.50	33.54	24.69 – 42.57	67,590
	Cascade County MSA	31.02	33.85	27.56 – 40.14	64,520
Postmasters and mail superintendents					
15002	U.S.	22.28	21.51	18.23 – 26.23	46,350
	Montana	19.21	18.55	16.16 – 22.26	39,950
Education administrators					
15005	U.S.	27.77	29.04	21.09 – 38.48	57,770
	Montana	26.34	25.73	21.62 – 35.64	54,790
	Yellowstone County MSA	27.74	28.45	22.47 – 36.85	57,690
	Cascade County MSA	24.90	24.61	20.88 – 33.69	51,790

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Medicine & health services managers					
15008	U.S.	25.17	23.49	18.22 – 34.41	52,340
	Montana	21.15	20.03	16.77 – 24.99	43,990
	Yellowstone County MSA	18.86	16.99	9.82 – 22.79	39,240
	Cascade County MSA	23.59	22.64	18.20 – 32.35	49,080
Property & real estate managers & administrators					
15011	U.S.	17.32	14.39	10.11 – 20.71	36,020
	Montana	10.66	9.52	8.89 – 10.89	22,180
	Yellowstone County MSA	8.45	8.10	7.42 – 9.35	17,580
Industrial production managers					
15014	U.S.	27.79	27.08	19.85 – 38.38	57,800
	Montana	21.99	20.83	16.70 – 26.31	45,740
	Yellowstone County MSA	21.80	20.16	15.09 – 29.61	45,350
Construction managers					
15017	U.S.	24.97	22.89	17.48 – 34.09	51,930
	Montana	21.26	20.51	17.80 – 23.62	44,220
	Yellowstone County MSA	21.59	21.31	17.90 – 23.94	44,900
	Cascade County MSA	20.62	20.08	16.40 – 23.42	42,890
Mining, quarrying & oil-gas well drilling managers					
15021	U.S.	30.30	30.50	19.77 – 43.06	63,020
	Montana	29.55	30.83	23.11 – 39.31	61,470
Communications, transportation & utilities operations managers					
15023	U.S.	26.11	25.39	18.52 – 36.66	54,310
	Montana	23.54	22.43	18.23 – 32.07	48,960
	Yellowstone County MSA	22.74	20.24	17.73 – 29.37	47,300
	Cascade County MSA	22.71	21.03	17.99 – 24.93	47,230
Food service & lodging managers					
15026	U.S.	14.12	12.84	9.53 – 16.68	29,370
	Montana	13.24	12.20	10.31 – 15.15	27,530
	Yellowstone County MSA	13.61	12.55	10.72 – 14.86	28,300
	Cascade County MSA	13.46	12.78	10.75 – 16.98	28,000
Public administration chief executives, legislators & general administrators					
19002	U.S.	15.54	9.20	5.81 – 22.82	32,320
	Montana	12.80	11.85	6.16 – 13.70	26,630
General managers & top executives					
19005	U.S.	30.08	26.87	16.81 – 45.51	62,570
	Montana	25.93	22.80	16.27 – 36.65	53,940
	Yellowstone County MSA	26.45	23.42	16.45 – 37.52	55,010
	Cascade County MSA	25.79	23.71	15.08 – 37.42	53,650

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other managers & administrators					
19999	U.S.	25.54	23.66	17.01 – 36.06	53,130
	Montana	20.58	19.50	14.21 – 25.36	42,810
	Yellowstone County MSA	17.12	15.09	9.81 – 22.56	35,620
	Cascade County MSA	20.49	17.45	12.33 – 28.10	42,630
Professional, Paraprofessional and Technical Occupations					
Insurance underwriters					
21102	U.S.	20.42	18.61	14.32 – 24.74	42,480
	Montana	14.55	13.20	11.34 – 15.99	30,270
	Yellowstone County MSA	17.95	15.38	12.19 – 20.06	37,340
	Cascade County MSA	13.38	12.82	11.24 – 14.51	27,830
Credit analysts					
21105	U.S.	19.19	17.11	13.27 – 22.98	39,920
	Montana	18.31	16.82	12.60 – 21.71	38,080
Loan officers & counselors					
21108	U.S.	20.05	16.99	12.68 – 24.15	41,700
	Montana	17.33	15.68	12.06 – 20.51	36,050
	Yellowstone County MSA	17.54	15.14	11.30 – 20.59	36,480
	Cascade County MSA	15.40	13.93	11.09 – 17.60	32,020
Tax preparers					
21111	U.S.	15.55	13.44	8.94 – 19.00	32,350
	Montana	13.12	13.67	7.85 – 15.35	27,300
	Yellowstone County MSA	10.65	10.09	8.11 – 13.30	22,160
	Cascade County MSA	10.33	11.17	7.28 – 12.07	21,490
Accountants & auditors					
21114	U.S.	20.13	18.20	14.34 – 23.78	41,880
	Montana	18.02	15.48	12.77 – 19.39	37,480
	Yellowstone County MSA	19.39	15.94	13.57 – 19.92	40,330
	Cascade County MSA	15.92	14.91	12.28 – 19.12	33,110
Budget analysts					
21117	U.S.	22.94	21.61	17.40 – 29.52	47,710
	Montana	19.31	17.97	15.95 – 21.63	40,160
All other financial specialists					
21199	U.S.	21.87	18.98	14.35 – 27.53	45,480
	Montana	14.43	13.93	11.76 – 15.34	30,010
	Cascade County MSA	12.24	11.32	7.99 – 14.79	25,460
Wholesale & retail buyers, except farm products					
21302	U.S.	17.31	15.17	11.29 – 20.64	36,010
	Montana	12.77	11.59	9.32 – 15.69	26,570
	Yellowstone County MSA	14.04	13.05	10.53 – 17.64	29,190
	Cascade County MSA	13.26	13.19	9.61 – 16.31	27,580

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Purchasing agents & buyers, farm products					
21305	U.S.	17.54	15.42	11.53 – 20.82	36,490
	Montana	16.67	15.94	11.45 – 18.67	34,670
	Yellowstone County MSA	14.87	15.90	11.61 – 18.07	30,940
Purchasing agents, except wholesale, retail & farm products					
21308	U.S.	19.87	18.29	14.26 – 23.87	41,320
	Montana	16.72	14.99	12.08 – 19.43	34,770
	Yellowstone County MSA	19.89	18.43	12.59 – 27.16	41,360
Special agents, insurance					
21505	U.S.	21.43	17.69	12.08 – 28.07	44,570
	Montana	16.67	15.88	9.88 – 21.64	34,680
Employment interviewers, private or public employment service					
21508	U.S.	17.63	14.33	11.31 – 19.04	36,660
	Yellowstone County MSA	16.88	12.00	9.89 – 20.42	35,110
	Cascade County MSA	13.20	12.02	10.49 – 16.54	27,450
Personnel, training & labor relations specialists					
21511	U.S.	19.47	18.13	13.56 – 24.12	40,500
	Montana	15.96	14.96	13.33 – 17.88	33,190
	Cascade County MSA	16.90	15.43	14.24 – 18.78	35,150
Cost estimators					
21902	U.S.	21.11	19.52	15.03 – 25.72	43,910
	Montana	16.78	16.09	12.39 – 20.83	34,900
	Yellowstone County MSA	17.38	17.95	12.81 – 21.50	36,140
	Cascade County MSA	16.48	16.18	13.84 – 18.98	34,270
Management analysts					
21905	U.S.	25.95	23.78	18.95 – 34.95	53,970
	Montana	28.00	24.01	16.49 – 41.78	58,230
Construction & building inspectors					
21908	U.S.	18.69	18.05	14.20 – 22.62	38,870
	Montana	15.14	14.68	13.06 – 16.77	31,490
	Cascade County MSA	16.58	16.10	14.62 – 18.30	34,480
Claims examiners, property & casualty insurance					
21921	U.S.	20.79	19.28	14.48 – 26.19	43,240
	Montana	15.76	15.74	14.42 – 17.35	32,790
All other management support workers					
21999	U.S.	19.80	17.82	13.38 – 24.22	41,180
	Montana	16.82	15.84	11.24 – 20.16	34,990
	Yellowstone County MSA	13.89	11.20	6.59 – 17.49	28,900
Mining engineers, including mine safety					
22108	U.S.	26.43	26.97	20.84 – 36.37	54,970
	Montana	27.00	27.63	22.64 – 36.03	56,160

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Petroleum engineers					
22111	U.S.	33.70	35.70	26.93 – 44.85	70,090
	Montana	26.76	28.63	21.61 – 36.41	55,660
	Yellowstone County MSA	25.28	25.80	18.65 – 35.16	52,580
Chemical engineers					
22114	U.S.	29.44	31.13	23.73 – 39.19	61,240
	Montana	28.51	31.59	25.19 – 38.05	59,300
Civil engineers, including traffic					
22121	U.S.	26.28	25.70	20.10 – 35.84	54,660
	Montana	22.23	21.27	16.22 – 28.81	46,230
	Yellowstone County MSA	27.96	30.48	24.26 – 37.07	58,160
	Cascade County MSA	23.03	22.34	16.03 – 31.32	47,890
Electrical & electronic engineers					
22126	U.S.	28.69	29.93	22.63 – 38.54	59,670
	Montana	21.54	21.18	15.62 – 26.08	44,810
	Cascade County MSA	23.18	23.34	20.27 – 28.83	48,210
Computer engineers					
22127	U.S.	28.77	29.77	22.23 – 38.70	59,850
	Montana	26.77	25.03	20.60 – 36.20	55,680
Industrial engineers, except safety					
22128	U.S.	26.18	25.30	20.52 – 35.51	54,450
	Montana	23.06	22.75	17.50 – 32.27	47,960
Safety engineers, except mining					
22132	U.S.	25.56	24.52	19.78 – 34.92	53,170
	Montana	22.94	22.15	16.28 – 31.45	47,710
Mechanical engineers					
22135	U.S.	26.23	25.62	20.52 – 35.68	54,550
	Montana	21.17	20.27	15.56 – 25.02	44,030
All other engineers					
22199	U.S.	28.44	29.66	21.94 – 38.59	59,160
	Montana	21.23	20.75	15.10 – 29.64	44,160
	Yellowstone County MSA	26.04	26.28	19.87 – 35.65	54,160
Architects, except landscape & marine					
22302	U.S.	24.85	22.94	17.97 – 33.13	51,680
	Montana	18.68	16.97	14.82 – 21.21	38,860
	Yellowstone County MSA	19.84	18.42	14.65 – 23.58	41,270
Landscape architects					
22308	U.S.	20.37	18.23	13.86 – 24.30	42,370
	Montana	21.47	21.12	15.38 – 26.90	44,660

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Surveyors & mapping scientists					
22311	U.S.	19.77	18.10	13.26 – 24.22	41,120
	Montana	16.93	15.35	13.42 – 19.36	35,220
	Yellowstone County MSA	16.95	15.30	13.92 – 18.75	35,260
Civil engineering technicians & technologists					
22502	U.S.	17.34	16.55	12.64 – 20.66	36,060
	Yellowstone County MSA	13.74	13.88	12.05 – 15.60	28,590
	Cascade County MSA	12.42	11.72	8.79 – 13.91	25,830
Electrical & electronic technicians & technologists					
22505	U.S.	18.32	17.30	13.31 – 22.00	38,110
	Montana	14.31	13.55	10.34 – 17.21	29,770
	Yellowstone County MSA	17.34	15.10	12.51 – 21.27	36,060
	Cascade County MSA	16.24	15.78	10.91 – 20.05	33,780
Mechanical engineering technicians & technologists					
22511	U.S.	19.84	18.83	14.82 – 23.50	41,280
	Montana	19.24	18.74	15.48 – 22.58	40,030
Drafters					
22514	U.S.	16.60	15.47	12.24 – 19.56	34,540
	Montana	13.47	12.53	10.65 – 15.20	28,020
	Yellowstone County MSA	14.12	12.95	10.90 – 15.71	29,360
	Cascade County MSA	13.20	12.67	10.71 – 15.79	27,450
Surveying & mapping technicians					
22521	U.S.	13.68	12.47	9.86 – 16.54	28,450
	Montana	13.21	11.91	10.41 – 15.64	27,470
	Yellowstone County MSA	11.93	11.40	10.22 – 13.37	24,810
	Cascade County MSA	13.38	12.52	11.29 – 14.86	27,830
All other engineering & related technicians & technologists					
22599	U.S.	19.15	17.99	13.54 – 23.11	39,840
	Montana	16.26	16.50	11.14 – 20.59	33,820
Chemists, except biochemists					
24105	U.S.	23.80	22.22	16.63 – 32.87	49,510
	Montana	19.17	17.94	14.92 – 22.04	39,880
	Yellowstone County MSA	18.98	20.30	15.44 – 22.81	39,490
Atmospheric & space scientists					
24108	U.S.	25.71	26.17	18.54 – 36.18	53,480
	Montana	27.05	27.32	22.13 – 35.59	56,270
Geologists, geophysicists & oceanographers					
24111	U.S.	27.50	25.91	19.15 – 38.28	57,210
	Montana	23.76	22.53	17.82 – 32.06	49,430
	Yellowstone County MSA	25.74	26.01	17.91 – 35.93	53,540

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other physical scientists					
24199	U.S.	25.23	23.55	17.26 – 35.31	52,480
	Montana	18.84	17.08	12.46 – 25.13	39,180
Foresters & conservation scientists					
24302	U.S.	21.21	20.56	16.42 – 24.78	44,110
	Montana	20.30	19.59	16.44 – 23.02	42,220
Agricultural & food scientists					
24305	U.S.	21.53	20.36	15.56 – 28.48	44,780
	Montana	21.77	20.98	15.47 – 27.72	45,270
Biological scientists					
24308	U.S.	24.04	22.18	16.92 – 32.62	49,990
	Montana	21.14	19.28	15.94 – 26.89	43,970
Biological, agricultural & food technicians & technologists, except health					
24502	U.S.	14.51	13.19	10.49 – 17.16	30,190
	Montana	11.85	11.33	9.50 – 13.20	24,640
Chemical technicians & technologists, except health					
24505	U.S.	15.85	15.12	11.93 – 18.97	32,980
	Montana	13.55	13.18	11.01 – 16.85	28,190
Petroleum technicians & technologists					
24511	U.S.	20.13	19.29	14.79 – 23.89	41,860
	Montana	15.45	14.14	12.84 – 18.77	32,140
All other physical & life science technicians & technologists					
24599	U.S.	16.31	15.02	11.39 – 19.93	33,930
	Montana	11.82	10.02	7.95 – 14.47	24,590
Systems analysts, electronic data processing					
25102	U.S.	26.02	25.09	19.50 – 35.66	54,110
	Montana	19.58	19.67	13.57 – 23.71	40,740
	Yellowstone County MSA	20.36	21.03	16.71 – 23.59	42,350
Database administrators					
25103	U.S.	24.28	23.07	17.52 – 33.61	50,490
	Montana	21.84	21.08	15.09 – 29.23	45,420
	Yellowstone County MSA	22.67	22.22	18.18 – 28.09	47,140
Computer support specialists					
25104	U.S.	19.52	17.85	13.88 – 23.47	40,590
	Montana	14.99	14.61	11.44 – 17.71	31,180
	Yellowstone County MSA	15.08	12.75	10.78 – 17.51	31,360
	Cascade County MSA	14.26	13.06	11.40 – 16.21	29,670

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Computer programmers					
25105	U.S.	25.67	23.83	18.51 – 35.23	53,400
	Montana	19.10	17.65	14.62 – 22.25	39,740
	Yellowstone County MSA	20.87	19.86	16.68 – 23.98	43,400
	Cascade County MSA	19.95	18.66	15.76 – 23.33	41,490
Computer programmer aides					
25108	U.S.	15.35	14.20	11.38 – 17.96	31,930
	Montana	14.44	14.01	11.82 – 17.52	30,030
	Yellowstone County MSA	13.78	13.34	11.74 – 15.94	28,670
All other computer scientists					
25199	U.S.	24.18	22.44	16.49 – 33.78	50,300
	Montana	15.80	13.53	9.64 – 17.38	32,860
Operations & systems researchers & analysts, except computer					
25302	U.S.	24.93	23.59	17.73 – 34.66	51,860
	Montana	21.93	18.78	16.97 – 29.36	45,620
Statisticians					
25312	U.S.	24.62	23.34	17.21 – 34.15	51,210
	Montana	20.96	19.46	15.07 – 25.70	43,600
Financial analysts, statistical					
25315	U.S.	26.07	22.45	16.64 – 36.02	54,230
	Montana	17.29	14.56	10.73 – 21.54	35,960
	Yellowstone County MSA	19.84	15.45	14.55 – 28.88	41,260
Economists, including market research analysts					
27102	U.S.	25.58	23.24	16.66 – 35.82	53,200
	Montana	21.17	21.23	17.21 – 23.95	44,040
Urban & regional planners					
27105	U.S.	21.68	20.61	15.83 – 26.99	45,100
	Montana	15.42	14.86	13.76 – 15.95	32,080
Psychologists					
27108	U.S.	24.81	23.10	17.58 – 34.07	51,610
	Montana	19.14	18.82	14.99 – 22.98	39,820
	Yellowstone County MSA	18.85	17.49	7.81 – 28.56	39,210
	Cascade County MSA	17.30	17.66	14.75 – 20.46	35,980
All other social scientists					
27199	U.S.	20.81	18.75	13.92 – 27.19	43,290
	Montana	19.70	18.72	14.23 – 23.18	40,980
Social workers, medical & psychiatric					
27302	U.S.	16.39	15.20	12.01 – 19.16	34,090
	Montana	14.04	13.58	11.31 – 16.18	29,200
	Yellowstone County MSA	17.02	16.60	12.86 – 20.22	35,390
	Cascade County MSA	20.17	15.49	14.24 – 17.54	41,950

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Social workers, except medical & psychiatric					
27305	U.S.	15.52	14.41	11.39 – 18.65	32,280
	Montana	12.47	12.12	9.67 – 14.78	25,930
	Yellowstone County MSA	10.92	9.73	8.71 – 11.24	22,710
	Cascade County MSA	12.93	12.81	11.90 – 13.69	26,900
Residential counselors					
27307	U.S.	9.86	9.06	7.41 – 10.97	20,510
	Montana	8.51	7.81	6.64 – 9.26	17,700
	Yellowstone County MSA	8.23	7.87	6.76 – 9.03	17,110
	Cascade County MSA	7.96	7.69	6.82 – 8.55	16,560
Human services workers					
27308	U.S.	10.93	10.27	7.99 – 13.01	22,740
	Montana	8.04	7.39	6.22 – 8.93	16,720
	Yellowstone County MSA	8.22	7.93	6.47 – 9.42	17,100
	Cascade County MSA	8.77	8.02	6.71 – 10.27	18,250
Recreation workers					
27311	U.S.	9.15	7.93	6.14 – 10.65	19,030
	Montana	8.65	7.59	5.98 – 9.86	17,980
	Yellowstone County MSA	7.30	7.12	5.84 – 8.42	15,190
	Cascade County MSA	9.54	9.09	7.33 – 10.20	19,850
Clergy					
27502	U.S.	15.04	13.89	9.31 – 18.66	31,280
	Montana	10.64	9.55	8.07 – 10.43	22,140
	Yellowstone County MSA	19.40	16.87	14.03 – 25.22	40,360
Directors, religious activities & education					
27505	U.S.	12.99	12.04	7.81 – 15.95	27,020
	Montana	7.72	7.42	6.49 – 8.35	16,060
Judges & magistrates					
28102	U.S.	29.85	32.16	13.27 – 49.17	62,080
	Montana	16.21	12.64	8.53 – 24.59	33,710
Adjudicators, hearings officers & judicial reviewers					
28105	U.S.	17.43	16.29	13.41 – 18.91	36,260
	Montana	17.65	17.26	15.82 – 18.70	36,720
Lawyers					
28108	U.S.	36.49	37.58	24.74 – 55.06	75,890
	Montana	27.46	22.20	17.61 – 38.96	57,120
	Yellowstone County MSA	31.68	27.88	18.62 – 48.83	65,890
	Cascade County MSA	30.24	28.58	18.57 – 44.32	62,900
Law clerks					
28302	U.S.	13.88	13.19	10.70 – 16.41	28,880
	Montana	12.96	12.81	11.40 – 14.99	26,950

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Paralegal personnel					
28305	U.S.	16.79	15.75	12.61 – 19.69	34,920
	Montana	13.57	13.88	12.06 – 15.04	28,220
	Yellowstone County MSA	13.44	13.17	10.61 – 14.58	27,950
	Cascade County MSA	10.44	10.80	8.09 – 11.75	21,720
Title searchers					
28308	U.S.	12.49	11.51	9.24 – 14.54	25,980
	Montana	8.93	8.86	7.52 – 10.05	18,570
Title examiners & abstractors					
28311	U.S.	15.31	13.99	11.02 – 18.04	31,850
	Montana	12.90	12.80	11.23 – 14.27	26,830
	Cascade County MSA	12.89	12.70	9.47 – 16.63	26,820
All other legal assistants & technicians, except clerical					
28399	U.S.	16.81	15.51	12.02 – 19.91	34,960
	Montana	11.31	10.22	8.68 – 12.49	23,520
Nursing instructors, postsecondary					
31114	U.S.		annual wage only		46,810
	Montana		annual wage only		42,060
All other physical sciences teachers, postsecondary					
31209	U.S.		annual wage only		52,480
	Montana		annual wage only		40,630
English language & literature teachers, postsecondary					
31214	U.S.		annual wage only		44,990
	Montana		annual wage only		35,030
Art, drama & music teachers, postsecondary					
31218	U.S.		annual wage only		45,000
	Montana		annual wage only		42,920
Mathematical science teachers, postsecondary					
31224	U.S.		annual wage only		46,750
	Montana		annual wage only		48,000
Computer science teachers, postsecondary					
31226	U.S.		annual wage only		46,880
	Montana		annual wage only		47,250
Anthropology and sociology teachers, postsecondary					
31231	U.S.		annual wage only		49,300
	Montana		annual wage only		44,420
History teachers, postsecondary					
31235	U.S.		annual wage only		48,660
	Montana		annual wage only		51,260

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Business teachers, postsecondary					
31242	U.S.		annual wage only		50,530
	Montana		annual wage only		50,190
Social work teachers, postsecondary					
31247	U.S.		annual wage only		43,420
	Montana		annual wage only		45,480
Education teachers, postsecondary					
31252	U.S.		annual wage only		43,430
	Montana		annual wage only		39,830
All other postsecondary teachers					
31299	U.S.		annual wage only		49,180
	Montana		annual wage only		51,540
Teachers, preschool					
31303	U.S.	9.39	8.32	6.62 – 10.76	19,530
	Montana	8.68	7.85	6.45 – 10.36	18,060
	Yellowstone County MSA	8.75	8.31	6.85 – 10.60	18,190
	Cascade County MSA	7.58	7.25	6.11 – 8.69	15,770
Teachers, kindergarten					
31304	U.S.		annual wage only		35,450
	Montana		annual wage only		27,090
	Yellowstone County MSA		annual wage only		27,730
	Cascade County MSA		annual wage only		27,300
Teachers, elementary school					
31305	U.S.		annual wage only		38,600
	Montana		annual wage only		30,740
	Yellowstone County MSA		annual wage only		31,860
	Cascade County MSA		annual wage only		29,760
Teachers, secondary school					
31308	U.S.		annual wage only		40,350
	Montana		annual wage only		31,150
	Yellowstone County MSA		annual wage only		32,910
	Cascade County MSA		annual wage only		31,580
Teachers, special education					
31311	U.S.		annual wage only		40,580
	Montana		annual wage only		29,730
	Yellowstone County MSA		annual wage only		29,610
	Cascade County MSA		annual wage only		28,540
Teachers & instructors, vocational education & training					
31314	U.S.	17.62	16.55	11.96 – 21.74	36,660
	Montana	19.63	18.87	13.10 – 25.08	40,820
	Yellowstone County MSA	14.63	13.41	9.13 – 18.44	30,430
	Cascade County MSA	19.68	19.21	16.36 – 23.03	40,920

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Instructors, nonvocational education					
31317	U.S.	13.60	11.92	8.74 – 16.41	28,280
	Montana	13.37	9.57	7.32 – 15.51	27,810
	Yellowstone County MSA	18.30	10.32	8.52 – 32.65	38,070
Instructors & coaches, sports & physical training					
31321	U.S.	12.68	10.69	6.54 – 16.48	26,360
	Montana	9.37	6.61	5.75 – 12.84	19,500
	Yellowstone County MSA	7.67	6.81	5.82 – 9.05	15,950
	Cascade County MSA	7.59	6.41	5.76 – 8.04	15,790
All other teachers & instructors					
31399	U.S.		annual wage only		31,340
	Montana		annual wage only		20,740
	Yellowstone County MSA		annual wage only		26,460
Librarians, professional					
31502	U.S.	19.24	18.49	14.63 – 23.14	40,020
	Montana	15.74	15.23	12.38 – 18.64	32,730
	Yellowstone County MSA	15.66	16.36	12.58 – 18.67	32,570
	Cascade County MSA	14.63	13.50	12.09 – 17.65	30,430
Technical assistants, library					
31505	U.S.	10.91	10.45	7.93 – 13.14	22,680
	Montana	9.56	9.17	7.48 – 10.79	19,880
	Yellowstone County MSA	8.88	8.58	7.41 – 10.18	18,470
	Cascade County MSA	8.56	8.47	6.80 – 10.06	17,810
Curators, archivists, museum technicians & conservators					
31511	U.S.	16.80	15.26	11.10 – 21.08	34,950
	Montana	13.18	13.59	9.73 – 15.60	27,420
	Yellowstone County MSA	13.47	13.40	12.11 – 14.78	28,020
Vocational & educational counselors					
31514	U.S.	19.51	18.58	13.65 – 24.02	40,580
	Montana	14.21	14.50	10.63 – 17.94	29,570
	Yellowstone County MSA	17.11	17.53	13.96 – 20.10	35,580
	Cascade County MSA	17.13	18.83	12.81 – 21.53	35,620
Instructional coordinators					
31517	U.S.	19.86	18.69	13.10 – 25.15	41,300
	Montana	15.44	15.93	13.07 – 18.03	32,110
Teacher aides, paraprofessional					
31521	U.S.	8.21	7.83	6.14 – 9.81	17,080
	Montana	7.97	7.51	6.54 – 8.43	16,580
	Yellowstone County MSA	6.91	6.46	5.78 – 8.12	14,380
	Cascade County MSA	7.08	7.07	6.16 – 8.07	14,730

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Physicians & surgeons					
32102	U.S.		annual wage only		102,020
	Montana		annual wage only		112,130
	Yellowstone County MSA		annual wage only		113,600
	Cascade County MSA	51.72	56.24		107,590
Dentists					
32105	U.S.	44.40	52.96		92,350
	Montana	29.81	22.79	20.98 – 42.97	62,000
	Yellowstone County MSA	53.54			111,370
Optometrists					
32108	U.S.	31.48	32.93	21.03 – 45.05	65,490
	Montana	30.03	27.43	18.26 – 45.82	62,470
Veterinarians & veterinary inspectors					
32114	U.S.	27.47	24.50	19.03 – 37.82	57,140
	Montana	21.77	21.63	18.82 – 23.99	45,280
	Yellowstone County MSA	19.94	17.81	16.01 – 22.39	41,480
	Cascade County MSA	24.39	23.06	20.37 – 30.60	50,730
All other health diagnosing & treating practitioners					
32199	U.S.	24.37	22.47	15.18 – 35.27	50,690
	Montana	26.56	28.29	20.45 – 36.65	55,240
Respiratory therapists					
32302	U.S.	17.14	16.75	14.44 – 19.15	35,660
	Montana	13.71	13.16	11.81 – 15.27	28,530
Occupational therapists					
32305	U.S.	24.65	23.19	18.82 – 32.97	51,260
	Montana	22.42	21.56	18.14 – 25.58	46,640
	Yellowstone County MSA	23.47	24.35	15.30 – 33.26	48,820
Physical therapists					
32308	U.S.	27.49	27.21	21.38 – 37.41	57,190
	Montana	24.40	23.37	20.91 – 28.58	50,750
	Yellowstone County MSA	28.96	31.36	25.34 – 37.62	60,250
	Cascade County MSA	27.90	27.27	23.03 – 36.20	58,040
Speech-language pathologists & audiologists					
32314	U.S.	22.12	20.71	16.62 – 26.57	46,010
	Montana	18.55	18.00	16.33 – 19.71	38,590
	Yellowstone County MSA	23.56	22.79	18.16 – 31.41	49,000
	Cascade County MSA	18.12	17.65	15.69 – 20.99	37,680
Recreational therapists					
32317	U.S.	13.98	13.35	10.37 – 16.82	29,080
	Montana	13.06	13.33	10.30 – 15.23	27,160

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other therapists					
32399	U.S.	15.81	14.44	11.04 – 18.76	32,880
	Montana	18.76	15.31	11.59 – 27.34	39,020
	Yellowstone County MSA	19.74	14.36	11.48 – 32.28	41,050
Registered nurses					
32502	U.S.	20.71	19.56	16.55 – 23.59	43,070
	Montana	16.78	16.20	14.19 – 18.90	34,900
	Yellowstone County MSA	16.85	15.85	14.64 – 18.50	35,050
	Cascade County MSA	17.89	17.87	15.51 – 20.30	37,220
Licensed practical nurses					
32505	U.S.	13.48	12.95	11.14 – 15.32	28,040
	Montana	10.95	10.83	9.94 – 11.98	22,780
	Yellowstone County MSA	11.38	11.03	10.22 – 12.53	23,660
	Cascade County MSA	10.74	10.68	9.57 – 11.57	22,330
Emergency medical technicians					
32508	U.S.	10.75	9.75	7.53 – 12.61	22,360
	Montana	9.13	8.36	7.08 – 10.19	19,000
Physician's assistants					
32511	U.S.	22.48	22.64	12.07 – 34.35	46,760
	Montana	26.87	27.77	21.61 – 36.26	55,890
Opticians, dispensing & measuring					
32514	U.S.	11.78	10.79	8.50 – 13.73	24,510
	Montana	9.90	9.65	7.68 – 11.27	20,580
	Yellowstone County MSA	10.61	10.41	7.82 – 11.96	22,070
	Cascade County MSA	9.35	9.57	8.08 – 10.74	19,450
Pharmacists					
32517	U.S.	28.89	31.84	25.15 – 38.58	60,090
	Montana	23.86	24.04	19.53 – 32.70	49,640
	Yellowstone County MSA	27.75	29.52	23.91 – 37.01	57,720
	Cascade County MSA	25.67	25.10	21.93 – 33.88	53,390
Pharmacy technicians & aides					
32519	U.S.	9.12	8.65	7.09 – 10.69	18,970
	Montana	8.74	8.60	7.15 – 10.00	18,180
	Yellowstone County MSA	8.53	7.93	6.75 – 9.62	17,750
	Cascade County MSA	9.49	9.45	7.93 – 10.54	19,740
Dietitians & nutritionists					
32521	U.S.	17.37	16.85	13.50 – 20.54	36,120
	Montana	17.00	16.65	14.71 – 19.15	35,350
	Yellowstone County MSA	16.84	17.02	15.87 – 18.44	35,020
Dietetic technicians					
32523	U.S.	10.18	9.39	7.18 – 12.33	21,180
	Montana	10.37	10.39	9.19 – 11.02	21,560

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Medical & clinical laboratory technologists					
32902	U.S.	18.36	17.92	15.10 – 21.00	38,190
	Montana	17.82	17.09	14.81 – 20.14	37,070
	Yellowstone County MSA	16.97	16.63	14.04 – 19.45	35,310
Medical & clinical laboratory technicians					
32905	U.S.	13.38	12.64	10.19 – 15.70	27,840
	Montana	12.04	11.90	10.25 – 13.70	25,040
	Yellowstone County MSA	11.79	11.50	9.96 – 13.06	24,530
Dental hygienists					
32908	U.S.	22.39	22.06	17.28 – 29.28	46,570
	Montana	25.91	25.06	21.71 – 33.71	53,900
	Yellowstone County MSA	21.07	21.91	20.15 – 23.61	43,820
	Cascade County MSA	23.39	23.21	21.68 – 24.75	48,650
Medical records technicians					
32911	U.S.	10.57	9.90	8.01 – 12.23	21,990
	Montana	9.45	8.95	7.48 – 11.01	19,650
	Yellowstone County MSA	9.30	8.69	7.42 – 10.81	19,350
Radiation therapists					
32913	U.S.	19.88	19.06	16.08 – 23.08	41,360
	Montana	19.83	19.98	17.95 – 22.38	41,260
Nuclear medicine technologists					
32914	U.S.	19.81	19.05	16.78 – 22.39	41,210
	Montana	18.69	18.33	16.49 – 20.53	38,870
Radiologic technologists					
32919	U.S.	16.51	15.81	13.25 – 18.95	34,340
	Montana	15.31	14.21	11.71 – 17.78	31,850
	Yellowstone County MSA	14.24	14.61	11.65 – 16.71	29,630
Cardiology technologists					
32925	U.S.	17.44	17.20	13.97 – 20.36	36,270
	Montana	17.45	17.34	14.59 – 20.31	36,300
Surgical technologists & technicians					
32928	U.S.	12.76	12.39	10.60 – 14.53	26,540
	Montana	11.15	11.21	9.94 – 12.58	23,200
Psychiatric technicians					
32931	U.S.	10.81	10.04	8.03 – 12.61	22,490
	Montana	9.95	9.24	6.91 – 11.66	20,700
Veterinary technicians & technologists					
32951	U.S.	9.87	9.56	7.79 – 11.24	20,520
	Montana	8.07	7.28	6.22 – 9.29	16,780
	Yellowstone County MSA	7.54	7.52	6.74 – 8.30	15,670
	Cascade County MSA	11.33	11.42	8.16 – 13.66	23,560

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other health professionals, paraprofessionals & technicians					
32999	U.S.	15.40	13.10	9.45 – 18.87	32,040
	Montana	14.16	12.47	10.40 – 15.53	29,460
	Yellowstone County MSA	13.70	12.05	10.45 – 13.63	28,490
Writers & editors					
34002	U.S.	18.91	16.62	12.35 – 22.92	39,340
	Montana	14.00	12.67	10.61 – 16.00	29,120
	Yellowstone County MSA	14.69	12.65	11.70 – 14.87	30,560
Technical writers & editors					
34005	U.S.	21.24	19.75	15.36 – 25.70	44,190
	Montana	14.26	12.43	10.66 – 16.80	29,670
Public relations specialists & publicity writers					
34008	U.S.	18.65	16.61	12.71 – 22.27	38,790
	Montana	14.09	12.77	10.88 – 16.33	29,300
	Yellowstone County MSA	15.57	14.12	11.23 – 18.08	32,370
	Cascade County MSA	10.14	9.58	6.69 – 12.52	21,080
Reporters & correspondents					
34011	U.S.	15.59	12.52	9.16 – 19.17	32,430
	Montana	12.37	10.31	8.09 – 14.82	25,720
Broadcast news analysts					
34014	U.S.	21.53	15.19	9.93 – 29.40	44,790
	Montana	11.12	8.82	7.54 – 15.96	23,120
Announcers, radio/television					
34017	U.S.	11.77	8.63	6.17 – 12.79	24,470
	Montana	7.93	6.65	5.81 – 8.91	16,500
	Yellowstone County MSA	8.08	6.85	5.83 – 9.18	16,800
Photographers					
34023	U.S.	12.25	10.07	7.33 – 14.82	25,480
	Montana	10.35	8.41	6.90 – 12.08	21,540
Camera operators, television & motion picture					
34026	U.S.	13.36	10.35	7.37 – 16.44	27,790
	Montana	8.87	7.40	5.82 – 10.51	18,440
Broadcast technicians					
34028	U.S.	15.29	12.15	8.14 – 19.38	31,790
	Montana	11.55	9.71	7.77 – 16.67	24,030
	Cascade County MSA	11.88	10.78	6.84 – 16.35	24,710
Artists & related workers					
34035	U.S.	17.21	15.24	11.44 – 20.18	35,790
	Montana	13.62	11.98	10.21 – 15.42	28,320
	Yellowstone County MSA	13.24	12.04	10.09 – 15.76	27,530
	Cascade County MSA	13.10	11.47	8.75 – 15.97	27,250

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Designers, except interior designers					
34038	U.S.	16.24	14.04	8.86 – 21.13	33,790
	Montana	9.10	7.71	6.40 – 9.73	18,920
	Yellowstone County MSA	9.45	7.72	6.38 – 11.72	19,660
	Cascade County MSA	8.19	7.73	6.92 – 8.53	17,030
Interior designers					
34041	U.S.	17.34	15.27	11.34 – 20.47	36,070
	Montana	13.83	14.33	10.31 – 15.92	28,770
	Yellowstone County MSA	12.25	10.69	9.72 – 15.47	25,480
Merchandise displayers & window trimmers					
34044	U.S.	9.61	8.74	7.18 – 10.75	19,990
	Montana	7.47	7.01	6.04 – 8.59	15,530
	Yellowstone County MSA	8.33	7.78	6.49 – 9.37	17,320
Music directors, singers, composers & related workers					
34047	U.S.		annual wage only		30,610
	Montana		annual wage only		33,690
Musicians, instrumental					
34051	U.S.		annual wage only		41,800
	Montana		annual wage only		31,360
Producers, directors, actors & other entertainers					
34056	U.S.		annual wage only		36,660
	Montana		annual wage only		31,760
	Yellowstone County MSA		annual wage only		30,380
Airplane dispatchers & air traffic controllers					
39002	U.S.	28.51	31.19	24.51 – 37.90	59,290
	Montana	23.90	23.08	20.65 – 30.76	49,700
Radio operators					
39008	U.S.	11.05	10.27	7.50 – 13.12	22,980
	Montana	9.19	9.81	7.25 – 11.06	19,120
Funeral directors & morticians					
39011	U.S.	19.26	16.85	12.26 – 23.20	40,070
	Montana	25.05	20.34	17.65 – 33.89	52,100
	Yellowstone County MSA	23.59	21.64	17.95 – 25.05	49,070
All other professional, paraprofessional & technical workers					
39999	U.S.	19.62	17.69	12.62 – 24.78	40,810
	Montana	16.38	13.91	10.77 – 19.16	34,070
	Yellowstone County MSA	15.94	11.20	10.48 – 20.01	33,150

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Sales & Related Occupations					
First-line supervisors & managers/supervisors-sales & related workers					
41002	U.S.	17.30	14.22	10.50 – 20.50	35,990
	Montana	14.45	12.95	9.97 – 16.80	30,060
	Yellowstone County MSA	16.35	14.58	10.44 – 20.01	34,000
	Cascade County MSA	13.72	12.07	9.11 – 16.55	28,530
Sales agents & placers, insurance					
43002	U.S.	20.61	16.53	11.85 – 25.01	42,880
	Montana	17.28	12.65	10.66 – 20.53	35,940
	Yellowstone County MSA	17.44	13.00	10.59 – 22.12	36,280
	Cascade County MSA	15.99	14.09	12.46 – 17.95	33,250
Brokers, real estate					
43005	U.S.	26.06	21.94	13.79 – 38.50	54,210
	Montana	36.88	44.20	22.89 – 52.65	76,720
Sales agents, real estate					
43008	U.S.	17.91	13.47	9.17 – 22.29	37,260
	Montana	18.54	15.34	10.48 – 21.46	38,560
	Yellowstone County MSA	16.84	12.99	11.46 – 20.65	35,040
Appraisers, real estate					
43011	U.S.	21.32	19.37	13.40 – 27.05	44,340
	Montana	17.00	19.55	10.97 – 22.02	35,370
Sales agents, securities, commodities & financial services					
43014	U.S.	29.70	23.12	15.10 – 49.54	61,780
	Montana	30.18	23.78	17.60 – 50.22	62,780
	Yellowstone County MSA	30.79	23.29	19.17 – 50.16	64,040
	Cascade County MSA	27.81	22.39	15.64 – 41.22	57,840
Sales agents, selected business services					
43017	U.S.	19.35	16.78	11.88 – 23.57	40,250
	Montana	13.37	11.50	9.10 – 15.86	27,810
	Yellowstone County MSA	12.81	11.31	9.75 – 14.30	26,650
	Cascade County MSA	13.05	11.53	9.19 – 15.73	27,150
Travel agents					
43021	U.S.	11.53	11.07	8.63 – 13.67	23,990
	Montana	10.62	10.25	8.33 – 11.79	22,090
	Yellowstone County MSA	9.13	9.32	7.90 – 10.35	19,000
Sales agents, advertising					
43023	U.S.	18.85	15.31	10.87 – 22.91	39,200
	Montana	12.85	11.18	8.60 – 16.27	26,740
	Yellowstone County MSA	14.34	13.81	9.36 – 17.08	29,830
	Cascade County MSA	12.12	11.03	9.47 – 14.10	25,210

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other sales representatives & salespersons, services					
43099	U.S.	16.38	13.74	10.01 – 19.41	34,070
	Montana	16.06	11.65	7.71 – 23.68	33,410
Sales representatives, scientific & related products & services, except retail					
49005	U.S.	24.28	21.49	15.62 – 33.57	50,500
	Montana	20.25	18.99	16.05 – 22.10	42,120
	Yellowstone County MSA	19.63	17.67	15.39 – 20.91	40,820
	Cascade County MSA	20.03	17.28	13.56 – 20.19	41,670
Sales representatives, except retail & scientific & related products & services					
49008	U.S.	20.23	17.57	12.67 – 24.80	42,080
	Montana	16.25	14.45	11.18 – 19.23	33,790
	Yellowstone County MSA	17.22	15.35	12.79 – 19.74	35,830
	Cascade County MSA	17.03	15.22	11.52 – 19.10	35,430
Salespersons, retail					
49011	U.S.	9.12	7.61	6.18 – 9.84	18,970
	Montana	8.64	7.16	6.04 – 9.40	17,960
	Yellowstone County MSA	9.50	7.42	6.05 – 11.43	19,770
	Cascade County MSA	8.08	6.96	6.00 – 8.95	16,800
Salespersons, parts					
49014	U.S.	12.14	10.93	8.27 – 14.60	25,240
	Montana	10.94	10.34	8.07 – 12.94	22,750
	Yellowstone County MSA	12.08	11.16	8.78 – 14.13	25,120
	Cascade County MSA	11.33	10.70	9.17 – 13.29	23,570
Counter & rental clerks					
49017	U.S.	7.76	6.97	6.03 – 8.79	16,140
	Montana	6.77	6.24	5.84 – 7.60	14,090
	Yellowstone County MSA	6.85	6.34	5.87 – 7.81	14,250
	Cascade County MSA	7.33	6.22	5.85 – 7.92	15,250
Stock clerks, sales floor					
49021	U.S.	8.00	7.31	6.11 – 9.04	16,640
	Montana	7.37	6.87	5.99 – 8.56	15,320
	Yellowstone County MSA	7.45	6.94	6.00 – 8.56	15,500
	Cascade County MSA	7.71	7.47	6.16 – 8.96	16,030
Cashiers					
49023	U.S.	7.31	6.58	5.95 – 8.22	15,210
	Montana	6.79	6.20	5.85 – 7.68	14,130
	Yellowstone County MSA	6.91	6.18	5.84 – 7.69	14,380
	Cascade County MSA	6.65	6.11	5.79 – 6.83	13,830
Telemarketers, door-to-door sales workers, news & street vendors & other related workers					
49026	U.S.	9.39	8.21	6.77 – 10.50	19,540
	Montana	8.11	7.35	6.22 – 8.88	16,860
	Cascade County MSA	6.75	6.11	5.78 – 6.62	14,050

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Demonstrators & promoters					
49034	U.S.	9.34	8.14	6.95 – 9.68	19,420
	Montana	6.60	6.21	5.86 – 7.15	13,720
All other sales & related workers					
49999	U.S.	13.10	10.85	7.61 – 16.13	27,250
	Montana	10.30	8.87	6.81 – 12.08	21,410
	Yellowstone County MSA	9.91	8.97	7.46 – 11.39	20,610
	Cascade County MSA	13.38	10.86	8.90 – 17.08	27,820

Clerical & Administrative Support Occupations

First-line supervisors & managers/supervisors-clerical & administrative support workers					
51002	U.S.	16.34	14.95	11.51 – 19.35	33,990
	Montana	13.71	12.58	10.04 – 16.08	28,510
	Yellowstone County MSA	14.43	13.25	10.93 – 16.38	30,010
	Cascade County MSA	14.61	13.48	9.98 – 17.14	30,380
Tellers					
53102	U.S.	8.49	8.27	7.05 – 9.70	17,650
	Montana	7.46	7.45	6.52 – 8.40	15,520
	Yellowstone County MSA	7.69	7.59	6.78 – 8.40	15,990
	Cascade County MSA	7.40	7.39	6.52 – 8.27	15,390
New accounts clerks					
53105	U.S.	10.46	10.26	8.69 – 11.88	21,750
	Montana	8.28	8.12	7.32 – 9.22	17,220
	Yellowstone County MSA	8.63	8.87	7.56 – 9.68	17,950
	Cascade County MSA	8.90	8.91	7.54 – 10.25	18,510
Loan interviewers					
53111	U.S.	11.98	11.15	9.37 – 13.78	24,920
	Montana	9.99	10.27	6.62 – 11.88	20,780
Credit checkers					
53117	U.S.	11.29	10.36	8.34 – 13.21	23,480
	Montana	14.30	15.77	10.89 – 17.42	29,750
	Yellowstone County MSA	8.64	8.05	6.70 – 10.10	17,980
Loan & credit clerks					
53121	U.S.	11.45	10.86	8.95 – 13.34	23,810
	Montana	8.96	8.78	7.55 – 9.94	18,640
	Yellowstone County MSA	9.57	9.33	8.10 – 10.55	19,900
	Cascade County MSA	8.59	8.72	7.45 – 9.77	17,870

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Adjustment clerks					
53123	U.S.	11.17	10.59	8.42 – 13.16	23,240
	Montana	9.10	8.34	6.32 – 10.91	18,920
	Yellowstone County MSA	9.30	8.34	6.22 – 11.31	19,340
	Cascade County MSA	11.06	10.07	8.02 – 12.27	23,010
Statement clerks					
53126	U.S.	9.37	8.96	7.39 – 10.67	19,490
	Montana	8.75	7.51	6.23 – 10.14	18,200
Brokerage clerks					
53128	U.S.	14.45	13.42	10.92 – 16.69	30,050
	Montana	13.32	12.59	10.43 – 15.70	27,700
Insurance adjusters, examiners & investigators					
53302	U.S.	19.54	18.41	14.25 – 23.61	40,640
	Montana	17.53	16.01	12.50 – 21.78	36,460
	Yellowstone County MSA	16.39	15.10	11.41 – 20.39	34,080
	Cascade County MSA	22.59	22.01	16.53 – 28.33	46,990
Insurance claims clerks					
53311	U.S.	11.95	11.54	9.61 – 13.90	24,860
	Montana	9.84	9.48	7.86 – 11.35	20,460
	Cascade County MSA	12.18	12.66	10.35 – 14.13	25,330
Insurance policy processing clerks					
53314	U.S.	12.02	11.52	9.47 – 14.12	25,010
	Montana	10.59	10.29	9.02 – 11.59	22,020
	Yellowstone County MSA	11.33	10.46	9.12 – 13.12	23,570
	Cascade County MSA	9.78	9.58	7.85 – 11.13	20,350
Bill & account collectors					
53508	U.S.	11.32	10.84	9.00 – 13.06	23,550
	Montana	10.82	9.65	7.84 – 12.50	22,500
	Yellowstone County MSA	10.92	10.34	8.11 – 12.42	22,710
	Cascade County MSA	12.06	9.77	8.31 – 14.31	25,090
Court clerks					
53702	U.S.	11.67	11.04	9.01 – 13.74	24,280
	Montana	10.32	10.39	9.14 – 11.65	21,450
Municipal clerks					
53705	U.S.	12.15	10.97	7.93 – 15.34	25,270
	Montana	10.75	10.95	9.35 – 11.77	22,360
Travel clerks					
53802	U.S.	9.51	8.70	7.20 – 10.68	19,780
	Montana	8.22	8.06	6.98 – 9.16	17,090

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Reservation & transportation ticket agents					
53805	U.S.	12.26	10.95	8.21 – 16.66	25,490
	Montana	11.59	9.91	8.05 – 15.99	24,110
	Yellowstone County MSA	11.69	9.58	7.09 – 17.40	24,320
	Cascade County MSA	13.54	11.67	8.88 – 18.48	28,170
Hotel desk clerks					
53808	U.S.	7.53	7.29	6.17 – 8.42	15,660
	Montana	6.24	6.06	5.66 – 6.88	12,970
	Yellowstone County MSA	6.38	6.17	5.71 – 7.33	13,260
	Cascade County MSA	6.12	6.07	5.65 – 6.66	12,740
Library assistants & bookmobile drivers					
53902	U.S.	8.81	8.17	6.28 – 10.61	18,320
	Montana	7.54	7.29	5.98 – 8.83	15,670
Teacher aides & educational assistants, clerical					
53905	U.S.	7.80	7.36	6.01 – 9.02	16,220
	Montana	7.25	7.22	6.06 – 8.30	15,090
	Yellowstone County MSA	7.43	6.83	5.76 – 8.46	15,450
	Cascade County MSA	7.04	7.00	5.96 – 8.15	14,650
Advertising clerks					
53908	U.S.	10.36	9.88	7.68 – 12.39	21,550
	Montana	9.00	8.74	6.56 – 10.60	18,710
Real estate clerks					
53914	U.S.	9.57	9.07	7.03 – 11.08	19,900
	Montana	8.40	7.91	6.94 – 9.38	17,470
Legal secretaries					
55102	U.S.	14.90	14.45	11.24 – 18.10	30,990
	Montana	10.36	9.76	8.96 – 11.43	21,560
	Yellowstone County MSA	12.64	12.49	10.92 – 14.09	26,290
	Cascade County MSA	11.12	10.76	8.63 – 13.07	23,130
Medical secretaries					
55105	U.S.	11.26	10.77	9.00 – 12.93	23,430
	Montana	9.49	8.43	7.49 – 11.17	19,740
	Yellowstone County MSA	11.38	11.60	10.45 – 13.02	23,660
	Cascade County MSA	9.31	8.80	7.48 – 11.08	19,370
Secretaries, except legal & medical					
55108	U.S.	11.86	11.32	9.03 – 14.14	24,670
	Montana	9.01	8.61	7.18 – 10.51	18,730
	Yellowstone County MSA	8.92	8.44	7.06 – 10.57	18,540
	Cascade County MSA	9.00	8.66	7.10 – 10.55	18,710
Stenographers and/or court reporters					
55302	U.S.	13.10	12.22	10.13 – 15.13	27,240
	Montana	11.47	11.19	8.17 – 14.34	23,860

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Receptionists & information clerks					
55305	U.S.	9.26	8.95	7.23 – 10.77	19,260
	Montana	7.66	7.42	6.28 – 8.77	15,940
	Yellowstone County MSA	8.07	7.90	6.81 – 9.06	16,790
	Cascade County MSA	8.03	7.54	6.09 – 9.67	16,700
Typists, including word processing					
55307	U.S.	11.23	10.86	8.89 – 13.14	23,350
	Montana	9.16	8.83	7.19 – 10.21	19,050
	Yellowstone County MSA	9.30	9.31	7.56 – 10.73	19,350
	Cascade County MSA	8.92	8.46	7.16 – 9.88	18,550
Personnel clerks, except payroll & timekeeping					
55314	U.S.	12.25	11.71	9.40 – 14.50	25,480
	Montana	11.40	10.48	9.22 – 13.40	23,720
	Yellowstone County MSA	10.94	10.68	9.14 – 13.17	22,750
	Cascade County MSA	10.24	9.62	8.22 – 11.58	21,310
File clerks					
55321	U.S.	8.63	8.09	6.64 – 9.97	17,950
	Montana	7.78	7.45	6.01 – 8.93	16,180
	Yellowstone County MSA	8.85	8.91	7.03 – 10.59	18,400
	Cascade County MSA	7.77	7.48	5.85 – 9.46	16,160
Order clerks, materials, merchandise & service					
55323	U.S.	10.99	10.36	8.29 – 12.94	22,850
	Montana	9.06	8.49	7.08 – 10.33	18,840
	Yellowstone County MSA	9.57	9.20	7.30 – 11.19	19,900
	Cascade County MSA	9.79	8.74	7.36 – 12.08	20,370
Procurement clerks					
55326	U.S.	11.52	10.88	8.56 – 13.55	23,970
	Montana	9.11	8.70	7.27 – 10.53	18,940
	Yellowstone County MSA	9.02	8.28	7.16 – 10.35	18,750
Statistical clerks					
55328	U.S.	12.02	11.24	8.86 – 14.77	24,990
	Montana	10.67	9.86	8.23 – 12.53	22,190
Interviewing clerks, except personnel & social welfare					
55332	U.S.	9.37	8.91	7.35 – 10.83	19,490
	Montana	10.13	9.17	7.55 – 13.50	21,070
	Yellowstone County MSA	9.58	9.54	7.79 – 11.02	19,920
Customer service representatives, utilities					
55335	U.S.	14.16	13.48	10.25 – 17.67	29,450
	Montana	11.60	11.03	9.41 – 13.54	24,120
	Yellowstone County MSA	10.68	10.56	9.26 – 12.31	22,210

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Bookkeeping, accounting & auditing clerks					
55338	U.S.	11.71	11.15	8.91 – 13.79	24,350
	Montana	9.51	9.22	7.38 – 11.15	19,790
	Yellowstone County MSA	9.88	9.62	7.80 – 11.67	20,550
	Cascade County MSA	9.43	9.04	7.34 – 11.06	19,620
Payroll & timekeeping clerks					
55341	U.S.	12.31	11.81	9.90 – 14.35	25,610
	Montana	10.51	9.97	8.69 – 11.83	21,870
	Yellowstone County MSA	10.38	9.90	8.57 – 11.89	21,590
	Cascade County MSA	9.56	9.27	7.84 – 10.70	19,890
Billing, cost & rate clerks					
55344	U.S.	11.36	10.90	9.14 – 13.09	23,620
	Montana	9.50	9.29	7.90 – 10.57	19,770
	Yellowstone County MSA	9.78	9.29	8.00 – 10.55	20,350
	Cascade County MSA	8.95	8.47	7.26 – 10.33	18,610
General office clerks					
55347	U.S.	10.06	9.41	7.31 – 11.72	20,920
	Montana	8.70	8.25	6.82 – 9.99	18,100
	Yellowstone County MSA	9.00	8.62	6.66 – 10.30	18,730
	Cascade County MSA	8.63	8.19	6.68 – 10.36	17,950
Billing, posting & calculating machine operators					
56002	U.S.	10.22	9.88	8.04 – 11.66	21,260
	Montana	9.61	9.33	8.44 – 10.25	19,990
	Cascade County MSA	9.16	9.25	8.71 – 9.79	19,060
Duplicating machine operators					
56005	U.S.	9.77	9.39	7.54 – 11.34	20,320
	Montana	8.47	7.67	6.50 – 9.17	17,620
	Yellowstone County MSA	7.37	7.28	6.30 – 8.44	15,330
Mail machine operators, preparation & handling					
56008	U.S.	9.10	8.30	6.77 – 10.36	18,930
	Montana	9.63	7.92	6.70 – 10.97	20,030
Computer operators, except peripheral equipment					
56011	U.S.	12.92	12.03	9.81 – 15.20	26,860
	Montana	10.53	10.06	8.05 – 12.09	21,900
	Yellowstone County MSA	11.73	9.99	8.81 – 15.53	24,390
Peripheral EDP equipment operators					
56014	U.S.	11.89	10.99	8.77 – 14.12	24,730
	Montana	9.45	8.99	7.60 – 10.87	19,650
Data entry keyers, except composing					
56017	U.S.	9.64	9.22	7.60 – 11.00	20,040
	Montana	8.71	8.37	7.13 – 10.28	18,110
	Yellowstone County MSA	8.71	8.50	7.08 – 10.01	18,110

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other office machine operators					
56099	U.S.	10.93	10.60	9.23 – 11.86	22,740
	Montana	9.30	9.22	7.82 – 10.61	19,350
Switchboard operators					
57102	U.S.	9.19	8.76	7.20 – 10.63	19,110
	Montana	7.32	6.91	5.93 – 8.37	15,220
	Yellowstone County MSA	7.32	6.98	5.90 – 8.20	15,220
	Cascade County MSA	8.81	8.62	7.24 – 10.12	18,320
Mail clerks, except mail machine operators & postal service					
57302	U.S.	9.02	8.49	7.03 – 10.44	18,760
	Montana	8.15	7.80	6.72 – 9.00	16,940
Postal mail carriers					
57305	U.S.	16.39	16.75	14.63 – 18.25	34,090
	Montana	15.89	16.47	13.69 – 18.05	33,050
Messengers					
57311	U.S.	8.59	8.02	6.43 – 10.04	17,860
	Montana	7.20	6.98	5.77 – 8.11	14,980
	Yellowstone County MSA	6.10	5.76	5.55 – 6.15	12,700
	Cascade County MSA	7.14	6.96	5.82 – 8.21	14,850
Dispatchers, police, fire & ambulance					
58002	U.S.	11.97	11.38	9.07 – 14.42	24,900
	Montana	9.60	9.50	7.82 – 11.28	19,960
Dispatchers, except police, fire & ambulance					
58005	U.S.	13.79	12.68	9.57 – 16.77	28,690
	Montana	11.29	10.46	7.43 – 13.86	23,480
	Yellowstone County MSA	13.00	12.39	8.60 – 16.12	27,030
	Cascade County MSA	10.28	9.44	7.97 – 11.43	21,380
Production, planning & expediting clerks					
58008	U.S.	14.78	14.07	10.71 – 18.05	30,740
	Montana	12.07	11.43	8.12 – 15.52	25,100
	Yellowstone County MSA	13.38	14.58	9.40 – 16.59	27,830
	Cascade County MSA	12.33	10.39	7.84 – 17.08	25,660
Transportation agents					
58011	U.S.	12.39	11.08	8.65 – 16.05	25,770
	Montana	11.89	12.25	8.46 – 14.26	24,720
Meter readers, utilities					
58014	U.S.	12.96	12.20	9.06 – 16.64	26,950
	Montana	11.94	12.10	8.58 – 14.79	24,830
Weighers, measurers, checkers & samplers, recordkeeping					
58017	U.S.	12.03	10.72	8.28 – 14.67	25,020
	Montana	9.11	9.39	6.72 – 10.91	18,940

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Stock clerks-stockroom, warehouse or storage yard					
58023	U.S.	10.03	9.19	7.22 – 11.83	20,860
	Montana	8.89	8.07	6.20 – 10.55	18,490
	Yellowstone County MSA	8.28	7.50	6.07 – 9.84	17,220
	Cascade County MSA	9.51	9.37	6.68 – 12.02	19,780
Order fillers, wholesale & retail sales					
58026	U.S.	9.73	9.15	7.38 – 11.30	20,240
	Montana	9.15	8.25	6.77 – 11.35	19,020
	Yellowstone County MSA	9.88	8.99	7.27 – 13.29	20,540
Shipping, receiving & traffic clerks					
58028	U.S.	11.65	10.82	8.16 – 15.37	24,230
	Montana	11.35	10.49	7.06 – 15.95	23,620
	Yellowstone County MSA	10.89	9.59	6.95 – 15.11	22,650
	Cascade County MSA	11.73	11.25	7.21 – 16.27	24,410
All other material recording, scheduling & distributing workers					
58099	U.S.	11.65	10.51	7.86 – 14.32	24,240
	Montana	13.43	11.09	8.70 – 17.31	27,930
All other clerical & administrative support workers					
59999	U.S.	11.65	11.02	8.52 – 14.01	24,220
	Montana	10.72	10.43	8.06 – 12.92	22,290
	Yellowstone County MSA	10.37	9.49	6.51 – 12.98	21,570
Service Occupations					
Fire fighting & prevention supervisors					
61002	U.S.	21.94	21.55	16.35 – 28.66	45,630
	Montana	17.57	16.48	12.96 – 21.69	36,540
Police & detective supervisors					
61005	U.S.	24.08	23.41	17.85 – 33.38	50,080
	Montana	18.80	17.08	14.83 – 20.45	39,100
Housekeeping supervisors					
61008	U.S.	10.20	9.42	7.49 – 11.95	21,220
	Montana	8.88	8.19	6.97 – 10.03	18,480
	Yellowstone County MSA	8.98	8.52	7.03 – 9.85	18,680
	Cascade County MSA	8.46	7.31	5.79 – 10.21	17,600
All other supervisors & managers/supervisors-service workers					
61099	U.S.	12.71	11.21	8.41 – 15.32	26,440
	Montana	9.80	8.97	7.10 – 11.22	20,380
	Yellowstone County MSA	10.24	9.70	7.89 – 11.18	21,290
	Cascade County MSA	9.15	8.01	6.63 – 11.02	19,030
Firefighters					
63008	U.S.	15.63	14.99	10.75 – 19.64	32,500
	Montana	15.00	15.06	13.09 – 17.20	31,200

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Police detectives					
63011	U.S.	21.20	20.82	16.11 – 25.17	44,100
	Montana	17.31	16.84	15.84 – 18.30	36,000
Police patrol officers					
63014	U.S.	18.78	18.13	13.87 – 23.03	39,060
	Montana	14.01	13.49	11.68 – 16.03	29,140
Parking enforcement officers					
63021	U.S.	12.19	11.95	10.01 – 14.34	25,350
	Montana	8.95	9.14	8.26 – 9.81	18,610
Bailiffs					
63023	U.S.	12.38	11.17	8.48 – 15.62	25,750
	Montana	9.31	9.59	8.25 – 10.26	19,360
Criminal investigators, public service					
63028	U.S.	26.48	28.78	20.78 – 36.08	55,080
	Montana	27.53	30.35	23.76 – 36.80	57,270
Sheriffs & deputy sheriffs					
63032	U.S.	14.64	13.59	11.21 – 17.35	30,460
	Montana	15.08	14.33	12.24 – 17.56	31,370
Detectives & investigators, except public					
63035	U.S.	12.16	10.11	7.86 – 15.15	25,300
	Montana	9.12	9.25	8.76 – 9.73	18,970
Crossing guards					
63044	U.S.	8.20	7.18	5.87 – 9.41	17,050
	Montana	6.75	6.54	5.81 – 7.84	14,050
Guards & watch guards					
63047	U.S.	8.60	7.81	6.46 – 9.67	17,890
	Montana	7.46	7.01	5.96 – 8.31	15,510
	Yellowstone County MSA	6.75	6.41	5.73 – 7.64	14,030
	Cascade County MSA	6.69	6.10	5.68 – 7.59	13,910
All other protective service workers					
63099	U.S.	9.82	8.40	6.40 – 11.96	20,430
	Montana	9.17	8.90	6.34 – 11.05	19,070
	Yellowstone County MSA	9.29	9.75	7.70 – 10.92	19,320
Hosts & hostesses, restaurant, lounge or coffee shop					
65002	U.S.	6.88	6.45	5.79 – 7.84	14,310
	Montana	5.98	5.81	5.56 – 6.30	12,430
	Yellowstone County MSA	6.12	5.83	5.57 – 6.72	12,740
	Cascade County MSA	5.81	5.84	5.55 – 6.24	12,090

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Bartenders					
65005	U.S.	6.82	6.25	5.72 – 7.71	14,190
	Montana	6.37	6.23	5.69 – 7.23	13,250
	Yellowstone County MSA	6.47	6.05	5.64 – 7.47	13,470
	Cascade County MSA	6.73	6.52	5.82 – 7.74	14,000
Waiters & waitresses					
65008	U.S.	6.11	5.85	5.58 – 6.32	12,700
	Montana	5.73	5.78	5.53 – 6.10	11,910
	Yellowstone County MSA	5.76	5.77	5.53 – 6.10	11,970
	Cascade County MSA	5.96	5.89	5.59 – 6.42	12,400
Food servers, outside					
65011	U.S.	7.50	6.88	5.88 – 8.45	15,600
	Montana	6.63	6.42	5.74 – 7.70	13,800
Dining room & cafeteria attendants & bartender helpers					
65014	U.S.	6.44	6.03	5.67 – 7.11	13,390
	Montana	5.75	5.77	5.53 – 6.07	11,970
	Yellowstone County MSA	5.88	5.80	5.55 – 6.16	12,230
	Cascade County MSA	5.56	5.76	5.52 – 6.03	11,570
Counter attendants-lunchroom, coffee shop or cafeteria					
65017	U.S.	6.57	6.15	5.70 – 7.42	13,670
	Montana	6.33	6.10	5.65 – 7.11	13,160
	Yellowstone County MSA	5.84	5.75	5.53 – 6.09	12,160
	Cascade County MSA	6.03	6.06	5.64 – 6.57	12,550
Bakers, bread & pastry					
65021	U.S.	8.84	8.17	6.57 – 10.36	18,380
	Montana	8.09	7.87	6.70 – 9.11	16,830
	Yellowstone County MSA	7.96	7.52	6.38 – 8.75	16,570
	Cascade County MSA	8.08	7.95	6.58 – 9.62	16,800
Butchers & meat cutters					
65023	U.S.	11.48	10.95	7.99 – 14.28	23,870
	Montana	10.55	10.65	8.35 – 12.23	21,940
	Yellowstone County MSA	11.62	11.29	9.44 – 13.19	24,170
	Cascade County MSA	10.28	10.40	7.93 – 11.60	21,380
Cooks, restaurant					
65026	U.S.	8.30	7.81	6.38 – 9.53	17,270
	Montana	7.29	7.12	6.16 – 8.20	15,170
	Yellowstone County MSA	7.46	7.39	6.44 – 8.28	15,510
	Cascade County MSA	7.01	6.92	6.14 – 8.02	14,570
Cooks, institution or cafeteria					
65028	U.S.	8.22	7.74	6.24 – 9.55	17,100
	Montana	7.99	7.73	6.59 – 8.94	16,620
	Yellowstone County MSA	7.48	7.48	6.61 – 8.32	15,550
	Cascade County MSA	7.58	7.49	6.12 – 8.92	15,770

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Cooks, fast food					
65032	U.S.	6.29	5.99	5.65 – 6.88	13,090
	Montana	5.65	5.77	5.52 – 6.08	11,750
	Yellowstone County MSA	5.55	5.80	5.54 – 6.05	11,540
	Cascade County MSA	5.74	5.74	5.52 – 5.99	11,930
Cooks, short order					
65035	U.S.	7.28	6.92	5.91 – 8.34	15,150
	Montana	6.48	6.25	5.72 – 7.44	13,480
	Yellowstone County MSA	7.29	7.29	6.47 – 8.11	15,160
	Cascade County MSA	6.31	6.18	5.71 – 7.08	13,120
Food preparation workers					
65038	U.S.	7.09	6.59	5.82 – 8.14	14,740
	Montana	6.45	6.13	5.66 – 7.35	13,420
	Yellowstone County MSA	6.30	5.97	5.61 – 6.68	13,110
	Cascade County MSA	6.46	6.20	5.69 – 7.35	13,450
Combined food preparation & service workers					
65041	U.S.	6.39	6.02	5.66 – 7.00	13,290
	Montana	5.86	5.82	5.55 – 6.21	12,200
	Yellowstone County MSA	5.77	5.85	5.56 – 6.21	12,010
	Cascade County MSA	5.68	5.78	5.53 – 6.08	11,820
All other food service workers					
65099	U.S.	7.67	7.00	5.90 – 8.71	15,950
	Montana	6.56	6.13	5.69 – 7.49	13,640
	Yellowstone County MSA	6.54	6.11	5.65 – 7.34	13,610
Dental assistants					
66002	U.S.	11.22	10.88	8.94 – 13.11	23,330
	Montana	9.69	9.41	8.64 – 10.81	20,150
	Yellowstone County MSA	10.10	10.68	8.11 – 11.49	21,000
	Cascade County MSA	9.82	9.75	8.95 – 10.78	20,420
Medical assistants					
66005	U.S.	10.18	9.94	8.18 – 11.70	21,160
	Montana	8.79	8.89	6.98 – 9.94	18,290
	Yellowstone County MSA	9.95	10.31	8.86 – 11.30	20,690
	Cascade County MSA	8.79	8.39	6.80 – 9.98	18,280
Nursing aides, orderlies & attendants					
66008	U.S.	8.31	7.99	6.72 – 9.54	17,290
	Montana	7.45	7.42	6.42 – 8.42	15,490
	Yellowstone County MSA	7.84	7.77	7.01 – 8.55	16,300
Home health aides					
66011	U.S.	8.17	7.81	6.65 – 9.15	16,990
	Montana	7.51	7.46	6.49 – 8.29	15,620
	Yellowstone County MSA	6.71	6.70	5.82 – 7.80	13,960

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Physical & corrective therapy assistants & aides					
66017	U.S.	12.02	10.51	8.03 – 15.03	24,990
	Montana	9.06	8.63	7.32 – 10.10	18,850
	Yellowstone County MSA	8.90	8.32	7.48 – 9.79	18,520
	Cascade County MSA	10.18	9.33	7.53 – 12.86	21,170
Occupational therapy assistants & aides					
66021	U.S.	14.28	13.80	9.64 – 17.74	29,710
	Montana	10.42	11.42	7.70 – 12.65	21,670
All other health service workers					
66099	U.S.	9.73	9.21	7.38 – 11.36	20,230
	Montana	8.57	8.68	6.85 – 9.91	17,820
	Yellowstone County MSA	8.84	8.73	7.36 – 9.89	18,380
Maids & housekeeping cleaners					
67002	U.S.	7.28	6.85	5.89 – 8.28	15,140
	Montana	6.26	6.01	5.63 – 6.90	13,010
	Yellowstone County MSA	6.50	6.31	5.75 – 7.44	13,530
	Cascade County MSA	6.17	6.00	5.63 – 6.64	12,830
Janitors & cleaners, except maids & housekeeping cleaners					
67005	U.S.	8.44	7.66	6.14 – 9.84	17,570
	Montana	7.65	7.20	5.96 – 8.80	15,900
	Yellowstone County MSA	6.98	6.14	5.68 – 7.78	14,510
	Cascade County MSA	7.09	6.36	5.72 – 8.10	14,740
Pest controllers & assistants					
67008	U.S.	11.11	10.81	8.80 – 13.02	23,100
	Montana	10.26	10.14	6.43 – 14.16	21,340
All other cleaning & building service workers					
67099	U.S.	9.52	8.58	6.75 – 11.43	19,810
	Montana	8.40	8.03	6.44 – 9.68	17,470
	Yellowstone County MSA	8.58	8.05	6.79 – 9.50	17,840
Hairdressers, hairstylists & cosmetologists					
68005	U.S.	8.55	7.28	5.90 – 9.88	17,790
	Montana	7.02	6.28	5.73 – 7.82	14,600
	Yellowstone County MSA	8.30	6.72	5.96 – 8.53	17,260
	Cascade County MSA	7.32	7.29	6.41 – 8.14	15,230
Amusement & recreation attendants					
68014	U.S.	6.84	6.18	5.72 – 7.68	14,220
	Montana	6.14	5.82	5.56 – 6.47	12,780
	Yellowstone County MSA	6.29	5.85	5.57 – 6.90	13,080
	Cascade County MSA	6.00	5.83	5.57 – 6.35	12,480
Guides					
68017	U.S.	8.26	7.46	5.92 – 9.71	17,180
	Montana	7.91	7.05	5.86 – 8.59	16,460

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Ushers, lobby attendants & ticket takers					
68021	U.S.	6.43	6.00	5.65 – 6.77	13,380
	Montana	5.56	5.72	5.50 – 5.94	11,560
	Cascade County MSA	5.52	5.67	5.49 – 5.84	11,480
Baggage porters & bellhops					
68023	U.S.	7.13	6.41	5.77 – 8.00	14,820
	Montana	6.97	6.59	5.78 – 8.25	14,500
	Yellowstone County MSA	7.08	6.65	5.71 – 8.49	14,720
Personal and home care aides					
68035	U.S.	7.51	7.17	6.08 – 8.33	15,620
	Montana	6.22	6.12	5.65 – 6.67	12,940
	Yellowstone County MSA	6.54	6.49	5.85 – 7.49	13,600
Child care workers					
68038	U.S.	7.13	6.61	5.82 – 8.13	14,820
	Montana	6.12	5.92	5.60 – 6.60	12,730
	Yellowstone County MSA	5.59	5.72	5.50 – 5.95	11,620
	Cascade County MSA	6.36	6.11	5.67 – 7.09	13,230
Funeral attendants					
68041	U.S.	7.98	7.34	5.89 – 9.26	16,600
	Montana	7.84	7.45	6.18 – 8.72	16,300
	Yellowstone County MSA	7.24	7.04	5.89 – 8.25	15,050
All other service workers					
69999	U.S.	8.94	7.68	6.09 – 10.23	18,600
	Montana	8.78	7.31	6.00 – 9.15	18,270
	Yellowstone County MSA	6.93	6.14	5.67 – 8.08	14,410
Agricultural, Forestry, Fishing and Related Occupations					
First-line supervisors & managers/supervisors-agricultural, forestry, fishing & related workers					
72002	U.S.	14.49	13.18	10.61 – 17.25	30,150
	Montana	15.05	14.75	9.29 – 19.17	31,310
	Yellowstone County MSA	13.89	12.48	10.16 – 13.85	28,890
	Cascade County MSA	8.77	9.20	5.87 – 10.04	18,240
Fallers & buckers					
73002	U.S.	13.85	11.30	8.62 – 17.41	28,800
	Montana	17.56	17.96	15.72 – 20.26	36,520
Choke setters					
73005	U.S.	13.10	13.01	10.96 – 15.12	27,250
	Montana	15.39	14.99	14.14 – 16.34	32,010
Log-handling equipment operators					
73008	U.S.	12.06	11.38	9.10 – 14.76	25,090
	Montana	14.18	14.01	12.33 – 15.91	29,500

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Logging tractor operators					
73011	U.S.	11.46	10.94	9.06 – 13.38	23,830
	Montana	13.54	13.21	11.91 – 15.11	28,170
All other timber cutting & related logging workers					
73099	U.S.	12.49	11.41	9.95 – 14.41	25,980
	Montana	11.30	8.99	7.57 – 15.22	23,510
Forest/conservation workers					
79002	U.S.	11.98	11.13	8.04 – 15.03	24,910
	Montana	13.07	12.32	9.68 – 15.98	27,180
Log graders & scalers					
79008	U.S.	11.65	11.04	9.14 – 13.47	24,230
	Montana	14.11	14.41	12.71 – 15.78	29,350
Animal caretakers, except farm					
79017	U.S.	7.82	7.12	5.92 – 8.82	16,260
	Montana	7.36	6.62	5.74 – 8.38	15,320
	Yellowstone County MSA	6.43	6.10	5.69 – 7.45	13,370
	Cascade County MSA	6.90	6.51	5.80 – 7.92	14,350
Sprayers/applicators					
79036	U.S.	10.65	10.41	8.55 – 12.26	22,160
	Montana	8.36	7.74	6.31 – 10.20	17,390
Laborers, landscaping & groundskeeping					
79041	U.S.	9.22	8.24	6.71 – 10.48	19,170
	Montana	7.94	7.47	6.16 – 8.86	16,510
	Yellowstone County MSA	8.22	7.35	6.09 – 9.78	17,090
	Cascade County MSA	7.69	6.85	5.90 – 8.60	15,990
Veterinary assistants					
79806	U.S.	8.10	7.79	6.55 – 9.23	16,850
	Montana	6.50	6.34	5.81 – 7.40	13,520
	Yellowstone County MSA	5.80	5.84	5.56 – 6.11	12,070
All other agricultural, forestry, fishing & related workers					
79999	U.S.	10.08	8.73	6.78 – 12.00	20,970
	Montana	10.69	10.13	8.75 – 12.11	22,230
Production, Construction, Operating, Maintenance and Material Handling Occupations					
First-line supervisors & managers/supervisors-mechanics, installers & repairers					
81002	U.S.	20.28	19.04	14.47 – 24.59	42,190
	Montana	18.82	18.07	13.52 – 22.86	39,150
	Yellowstone County MSA	17.84	17.70	13.03 – 21.77	37,110
	Cascade County MSA	18.07	16.66	11.63 – 23.04	37,590

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
First-line supervisors & managers/supervisors-construction trades & extractive workers					
81005	U.S.	20.34	18.98	15.00 – 24.09	42,310
	Montana	17.50	17.36	13.15 – 20.34	36,400
	Yellowstone County MSA	18.55	19.44	15.08 – 22.23	38,590
	Cascade County MSA	13.73	14.94	6.55 – 18.21	28,570
First-line supervisors & managers/supervisors-production & operating workers					
81008	U.S.	18.71	17.46	13.29 – 22.68	38,910
	Montana	16.38	15.18	11.90 – 20.21	34,080
	Yellowstone County MSA	15.83	15.63	12.19 – 20.16	32,930
	Cascade County MSA	18.17	17.08	13.84 – 20.27	37,780
First-line supervisors & managers/supervisors-transportation & material-moving machine & vehicle operators					
81011	U.S.	18.49	17.66	13.49 – 22.30	38,460
	Montana	15.70	14.77	10.76 – 20.18	32,660
	Yellowstone County MSA	14.75	14.63	10.78 – 16.98	30,690
	Cascade County MSA	13.89	12.59	10.94 – 15.78	28,890
First-line supervisors & managers/supervisors-helpers, laborers & material-movers, hand					
81017	U.S.	15.52	14.58	11.03 – 18.64	32,280
	Montana	15.47	14.89	11.58 – 17.84	32,180
	Yellowstone County MSA	14.96	14.46	11.55 – 16.74	31,110
All other first-line supervisors & managers/supervisors-production, construction, maintenance & related workers					
81099	U.S.	18.75	17.34	12.65 – 23.45	39,010
	Montana	19.14	17.28	13.60 – 23.02	39,820
	Yellowstone County MSA	19.02	20.04	14.69 – 23.38	39,560
	Cascade County MSA	13.40	11.79	7.97 – 18.17	27,870
Precision inspectors, testers & graders					
83002	U.S.	14.44	13.30	10.31 – 17.86	30,040
	Montana	13.35	11.83	10.71 – 15.25	27,770
Production inspectors, testers, graders, sorters, samplers & weighers					
83005	U.S.	11.71	10.62	8.28 – 14.05	24,360
	Montana	12.87	13.71	10.71 – 14.96	26,760
	Yellowstone County MSA	11.85	11.08	10.32 – 14.24	24,640
	Cascade County MSA	11.37	9.87	8.43 – 15.84	23,650
Machinery maintenance mechanics					
85110	U.S.	15.69	15.21	12.40 – 18.50	32,630
	Montana	14.06	13.33	11.77 – 16.35	29,250
	Yellowstone County MSA	14.05	14.55	11.28 – 17.19	29,230
	Cascade County MSA	13.34	12.57	11.86 – 13.34	27,740
Machinery maintenance mechanics, water or power generation plant					
85118	U.S.	18.76	18.57	14.47 – 22.65	39,020
	Montana	19.66	20.83	18.20 – 22.78	40,900

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other machinery maintenance mechanics					
85119	U.S.	18.11	17.86	14.15 – 21.72	37,680
	Montana	18.80	18.57	16.36 – 21.44	39,110
Millwrights					
85123	U.S.	17.97	17.76	14.11 – 21.80	37,390
	Montana	21.88	18.78	14.76 – 32.78	45,520
Machinery maintenance workers					
85128	U.S.	14.93	14.54	11.36 – 18.06	31,060
	Montana	14.49	13.92	11.29 – 17.60	30,140
Maintenance repairers, general utility					
85132	U.S.	12.11	11.20	8.43 – 14.99	25,200
	Montana	9.90	9.27	7.18 – 11.88	20,600
	Yellowstone County MSA	9.56	8.81	7.02 – 11.08	19,890
	Cascade County MSA	9.46	8.67	6.41 – 11.64	19,670
Automotive mechanics					
85302	U.S.	13.97	13.16	10.02 – 17.14	29,060
	Montana	12.14	11.78	8.99 – 14.24	25,260
	Yellowstone County MSA	13.84	13.71	9.97 – 15.78	28,800
	Cascade County MSA	10.86	10.10	7.84 – 13.09	22,590
Automotive body & related repairers					
85305	U.S.	14.34	13.18	10.23 – 17.71	29,820
	Montana	11.83	10.80	8.83 – 14.97	24,610
	Yellowstone County MSA	13.17	12.95	9.75 – 15.65	27,390
	Cascade County MSA	10.67	9.81	8.00 – 13.63	22,190
Motorcycle repairers					
85308	U.S.	11.90	11.27	9.12 – 14.21	24,760
	Montana	9.81	8.95	7.47 – 12.30	20,410
	Yellowstone County MSA	11.09	11.70	9.26 – 12.98	23,060
	Cascade County MSA	8.71	8.53	7.27 – 9.63	18,110
Bus & truck mechanics & diesel engine specialists					
85311	U.S.	14.66	14.11	11.32 – 17.55	30,490
	Montana	13.87	13.71	11.47 – 16.36	28,850
	Yellowstone County MSA	14.27	14.51	11.63 – 17.13	29,670
	Cascade County MSA	16.14	15.55	12.13 – 18.82	33,570
Mobile heavy equipment mechanics, except engines					
85314	U.S.	15.71	15.16	12.04 – 18.43	32,670
	Montana	15.44	15.40	13.28 – 17.97	32,120
	Yellowstone County MSA	14.21	15.87	10.39 – 17.71	29,560
	Cascade County MSA	14.93	13.99	11.46 – 18.01	31,050

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Farm equipment mechanics					
85321	U.S.	11.31	10.94	8.86 – 13.20	23,530
	Montana	10.88	10.68	9.47 – 12.20	22,620
	Yellowstone County MSA	11.43	11.05	10.03 – 12.63	23,770
Aircraft mechanics					
85323	U.S.	18.34	18.09	14.76 – 21.98	38,150
	Montana	16.83	16.60	12.60 – 20.64	35,000
	Yellowstone County MSA	19.87	19.39	15.32 – 23.26	41,330
Small engine specialists					
85328	U.S.	10.82	10.38	8.11 – 12.92	22,500
	Montana	9.66	10.01	7.79 – 11.05	20,090
Central office & PBX installers & repairers					
85502	U.S.	20.63	21.00	18.09 – 23.52	42,910
	Montana	19.97	20.34	18.48 – 22.50	41,530
	Cascade County MSA	19.83	19.61	18.15 – 21.52	41,250
Radio mechanics					
85514	U.S.	15.46	14.71	11.21 – 18.73	32,150
	Montana	11.97	11.07	9.61 – 13.39	24,890
All other communications equipment mechanics, installers & repairers					
85599	U.S.	18.37	19.84	14.52 – 22.53	38,210
	Montana	17.55	20.29	10.26 – 22.60	36,510
Telephone & cable television line installers & repairers					
85702	U.S.	16.56	15.75	10.97 – 21.42	34,450
	Montana	16.18	17.71	10.00 – 21.51	33,660
	Yellowstone County MSA	18.02	18.82	17.04 – 20.22	37,480
Data processing equipment repairers					
85705	U.S.	15.15	14.11	10.72 – 18.55	31,520
	Montana	10.08	9.92	7.01 – 12.37	20,960
	Yellowstone County MSA	14.89	14.11	12.51 – 15.60	30,980
Electronic home entertainment equipment repairers					
85708	U.S.	12.18	11.32	8.90 – 14.59	25,340
	Montana	10.46	9.64	8.39 – 11.03	21,760
	Yellowstone County MSA	10.04	9.64	8.95 – 10.33	20,880
Electric home appliance & power tool repairers					
85711	U.S.	12.47	11.62	9.32 – 15.19	25,930
	Montana	9.45	8.58	7.48 – 11.03	19,660
	Yellowstone County MSA	9.30	8.79	7.38 – 11.21	19,330
Electronics repairers, commercial & industrial equipment					
85717	U.S.	17.21	17.11	13.37 – 20.93	35,800
	Montana	18.30	18.89	16.08 – 21.92	38,070

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Electrical power-line installers & repairers					
85723	U.S.	20.46	20.48	16.30 – 23.90	42,550
	Montana	20.88	21.08	18.41 – 23.33	43,430
	Yellowstone County MSA	19.62	19.39	18.07 – 20.68	40,810
Station installers & repairers, telephone					
85726	U.S.	18.44	19.06	15.80 – 22.17	38,360
	Montana	21.59	22.49	21.03 – 23.95	44,910
Electrical installers & repairers, transportation equipment					
85728	U.S.	16.20	16.28	12.63 – 18.98	33,690
	Montana	15.24	16.67	11.66 – 18.38	31,710
All other electrical & electronic equipment mechanics, installers & repairers					
85799	U.S.	16.17	16.35	11.40 – 20.11	33,640
	Montana	14.25	13.81	10.95 – 16.90	29,640
Heating, air conditioning & refrigeration mechanics & installers					
85902	U.S.	14.88	14.02	11.04 – 17.90	30,960
	Montana	14.39	13.95	10.47 – 18.21	29,930
	Yellowstone County MSA	12.92	12.48	10.34 – 15.79	26,880
	Cascade County MSA	15.42	14.87	11.02 – 20.21	32,080
Precision instrument repairers					
85905	U.S.	18.81	19.03	14.96 – 22.56	39,120
	Montana	17.04	17.57	10.17 – 20.15	35,450
Electromedical & biomedical equipment repairers					
85908	U.S.	16.54	16.44	12.60 – 19.72	34,410
	Montana	15.35	15.84	12.41 – 18.61	31,930
Electric meter installers & repairers					
85911	U.S.	19.22	19.64	15.41 – 22.87	39,970
	Montana	18.91	19.00	15.86 – 21.78	39,320
Office machine & cash register servicers					
85926	U.S.	14.34	13.38	10.68 – 17.48	29,830
	Montana	10.61	10.18	8.42 – 12.43	22,070
	Yellowstone County MSA	11.03	9.93	8.92 – 13.56	22,940
	Cascade County MSA	10.74	11.62	8.48 – 12.70	22,330
Mechanical control & valve installers & repairers					
85928	U.S.	16.92	17.14	13.22 – 20.35	35,190
	Montana	21.74	20.10	17.66 – 24.93	45,210
Installers & repairers, manufactured buildings, mobile homes & travel trailers					
85938	U.S.	10.81	10.30	8.17 – 12.70	22,490
	Montana	9.44	9.09	7.46 – 11.02	19,640
	Yellowstone County MSA	9.05	8.37	7.12 – 10.37	18,830
	Cascade County MSA	10.37	11.01	8.14 – 12.39	21,570

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Gas appliance repairers					
85944	U.S.	15.93	15.93	11.58 – 19.87	33,130
	Montana	14.10	11.59	10.39 – 18.27	29,320
Coin & vending machine servicers & repairers					
85947	U.S.	11.57	11.18	8.73 – 13.83	24,070
	Montana	11.96	11.09	9.82 – 13.63	24,880
	Yellowstone County MSA	9.85	10.31	6.55 – 12.21	20,490
Bicycle repairers					
85951	U.S.	7.91	7.55	6.14 – 9.19	16,460
	Montana	6.68	6.11	5.70 – 7.63	13,900
	Yellowstone County MSA	7.73	7.50	6.72 – 8.27	16,080
Tire repairers & changers					
85953	U.S.	8.58	8.08	6.78 – 9.85	17,850
	Montana	8.61	8.21	6.85 – 10.01	17,910
	Yellowstone County MSA	8.91	9.20	7.27 – 10.00	18,530
	Cascade County MSA	8.01	7.63	6.24 – 9.33	16,660
Menders, garments, linens & related					
85956	U.S.	7.99	7.69	6.60 – 8.82	16,610
	Montana	6.83	6.62	5.85 – 7.89	14,200
All other mechanics, installers & repairers					
85999	U.S.	14.55	13.59	10.23 – 18.27	30,270
	Montana	12.50	11.51	8.73 – 16.66	26,010
	Yellowstone County MSA	10.40	9.51	6.87 – 13.07	21,620
Carpenters					
87102	U.S.	15.20	13.82	10.84 – 18.57	31,610
	Montana	12.90	12.71	11.16 – 14.65	26,830
	Yellowstone County MSA	13.76	13.31	11.23 – 15.14	28,630
	Cascade County MSA	11.91	12.04	9.53 – 13.36	24,780
Drywall installers					
87108	U.S.	15.50	14.02	11.31 – 18.50	32,240
	Montana	13.27	11.57	11.01 – 14.93	27,600
Electricians					
87202	U.S.	18.05	16.98	12.69 – 22.34	37,530
	Montana	17.73	18.14	14.90 – 21.11	36,880
	Yellowstone County MSA	19.23	19.74	17.69 – 21.92	39,990
	Cascade County MSA	19.66	20.96	17.98 – 22.78	40,900
Brickmasons					
87302	U.S.	17.81	17.10	13.12 – 21.67	37,040
	Montana	16.82	17.21	12.63 – 20.07	34,990
	Yellowstone County MSA	13.11	12.37	11.81 – 12.93	27,260

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Concrete & terrazzo finishers					
87311	U.S.	13.82	12.39	9.99 – 16.65	28,740
	Montana	12.22	11.56	10.56 – 14.06	25,430
	Yellowstone County MSA	11.60	11.08	9.32 – 13.64	24,130
	Cascade County MSA	13.69	14.08	12.14 – 15.25	28,470
Painters & paperhangers, construction & maintenance					
87402	U.S.	13.45	12.07	9.81 – 16.16	27,980
	Montana	14.07	13.76	10.72 – 15.84	29,260
	Yellowstone County MSA	16.81	20.61	11.08 – 23.19	34,970
	Cascade County MSA	15.84	16.02	13.75 – 18.64	32,950
Plumbers, pipefitters & steamfitters					
87502	U.S.	18.00	16.67	12.81 – 22.18	37,430
	Montana	17.35	18.04	13.01 – 21.11	36,080
	Yellowstone County MSA	16.94	18.08	10.88 – 21.88	35,240
	Cascade County MSA	19.07	19.89	16.75 – 22.18	39,660
Pipelayers					
87508	U.S.	13.61	11.96	9.38 – 17.48	28,310
	Montana	14.49	12.83	11.54 – 17.61	30,130
	Yellowstone County MSA	13.75	12.99	12.12 – 15.20	28,600
Septic tank servicers & sewer pipe cleaners					
87511	U.S.	13.36	12.22	10.02 – 15.79	27,790
	Montana	13.03	12.39	11.54 – 13.25	27,100
Carpet installers					
87602	U.S.	14.81	12.73	9.91 – 18.77	30,800
	Montana	8.98	8.32	7.50 – 9.77	18,680
Paving, surfacing & tamping equipment operators					
87708	U.S.	13.14	11.78	9.55 – 15.81	27,340
	Montana	12.32	11.46	10.50 – 14.40	25,620
Highway maintenance workers					
87711	U.S.	12.40	11.77	9.18 – 15.05	25,780
	Montana	13.17	13.21	11.70 – 14.62	27,390
	Yellowstone County MSA	13.81	14.15	13.30 – 15.00	28,730
Rail-track laying & maintenance equipment operators					
87714	U.S.	16.82	16.50	14.35 – 19.40	34,990
	Montana	17.84	17.37	14.87 – 19.13	37,110
Insulation workers					
87802	U.S.	13.82	12.25	9.71 – 15.94	28,750
	Montana	12.14	11.77	10.65 – 12.97	25,240
Hazardous materials removal workers					
87803	U.S.	14.60	13.28	10.76 – 17.85	30,370
	Montana	14.07	13.90	12.77 – 15.34	29,260

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Sheet metal duct installers					
87805	U.S.	15.63	13.48	10.38 – 19.21	32,520
	Montana	14.43	15.02	10.02 – 18.59	30,010
	Yellowstone County MSA	15.75	17.39	11.01 – 19.59	32,760
Roofers					
87808	U.S.	13.63	12.18	9.72 – 16.47	28,340
	Montana	11.36	11.57	9.44 – 12.94	23,630
	Yellowstone County MSA	11.39	11.79	9.58 – 13.45	23,690
Glaziers					
87811	U.S.	13.95	12.70	10.26 – 16.45	29,020
	Montana	11.42	10.85	7.76 – 14.45	23,750
	Yellowstone County MSA	10.76	10.10	7.73 – 13.53	22,370
Structural metal workers					
87814	U.S.	17.09	15.81	11.62 – 21.75	35,550
	Montana	16.83	17.55	15.57 – 18.89	35,000
Fence erectors					
87817	U.S.	10.33	9.53	7.47 – 11.93	21,490
	Montana	8.90	8.49	7.19 – 10.61	18,520
	Yellowstone County MSA	9.62	9.82	8.09 – 10.98	20,010
All other construction trades workers					
87899	U.S.	13.52	11.83	9.17 – 16.71	28,120
	Montana	10.83	10.49	8.20 – 12.43	22,520
Earth drillers, except oil & gas					
87902	U.S.	14.54	13.41	10.68 – 17.46	30,240
	Montana	13.70	13.47	11.56 – 15.43	28,510
Blasters & explosives workers					
87905	U.S.	15.40	14.86	11.42 – 18.61	32,020
	Montana	19.14	18.51	17.41 – 19.70	39,820
Rotary drill operators, oil & gas extraction					
87911	U.S.	17.58	15.36	11.81 – 21.79	36,560
	Montana	17.23	17.74	16.52 – 18.93	35,840
Derrick operators, oil & gas extraction					
87914	U.S.	13.81	12.53	10.01 – 17.34	28,720
	Montana	12.02	12.06	10.45 – 12.96	25,010
Service unit operators					
87917	U.S.	11.94	10.76	9.23 – 13.51	24,840
	Montana	15.60	13.91	11.86 – 19.07	32,440
Roustabouts					
87921	U.S.	10.40	9.51	7.39 – 11.72	21,630
	Montana	10.50	10.41	9.41 – 11.27	21,840

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other construction & extractive workers, except helpers					
87999	U.S.	13.90	12.62	9.44 – 17.61	28,920
	Yellowstone County MSA	18.74	18.73	17.74 – 19.70	38,980
Machinists					
89108	U.S.	14.35	13.87	10.90 – 17.36	29,860
	Montana	12.86	12.50	9.55 – 15.79	26,740
	Yellowstone County MSA	12.95	12.80	10.67 – 15.37	26,940
Tool grinders, filers, sharpeners & other precision grinders					
89111	U.S.	13.45	12.82	10.13 – 16.09	27,980
	Montana	10.99	11.48	8.11 – 12.98	22,850
Jewelers & silversmiths					
89123	U.S.	12.90	11.60	8.35 – 15.79	26,820
	Montana	11.04	11.00	10.62 – 11.38	22,970
Sheet metal workers					
89132	U.S.	15.22	13.47	10.16 – 19.16	31,670
	Montana	15.60	16.44	10.11 – 20.32	32,450
	Yellowstone County MSA	16.21	17.46	10.13 – 19.95	33,720
	Cascade County MSA	15.98	16.20	11.23 – 19.88	33,230
Boilermakers					
89135	U.S.	18.82	18.45	15.04 – 22.49	39,150
	Montana	20.57	21.05	18.54 – 23.11	42,780
All other precision metal workers					
89199	U.S.	14.75	13.22	10.21 – 19.08	30,680
	Montana	12.33	10.69	9.18 – 14.04	25,650
Wood machinists					
89308	U.S.	9.98	9.61	7.77 – 11.50	20,770
	Montana	10.16	10.37	8.31 – 12.04	21,120
Cabinetmakers & bench carpenters					
89311	U.S.	11.49	10.76	8.59 – 13.58	23,900
	Montana	10.40	10.32	8.42 – 11.59	21,640
	Yellowstone County MSA	11.12	10.83	7.62 – 13.28	23,130
Furniture finishers					
89314	U.S.	10.03	9.56	7.68 – 11.42	20,860
	Montana	7.36	6.72	6.04 – 8.40	15,310
Fabric & apparel patternmakers & layout workers					
89502	U.S.	13.04	10.38	7.61 – 14.85	27,110
	Montana	9.59	9.82	9.05 – 10.66	19,950
Custom tailors & sewers					
89505	U.S.	9.76	8.96	6.86 – 11.45	20,300
	Montana	7.48	7.15	6.07 – 8.48	15,550

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Upholsterers					
89508	U.S.	11.09	10.60	8.56 – 12.94	23,070
	Montana	8.75	8.39	6.44 – 11.09	18,210
Paste-up workers					
89706	U.S.	10.73	9.53	7.43 – 12.85	22,330
	Montana	10.39	8.70	6.71 – 12.87	21,610
Electronic pagination system operators					
89707	U.S.	14.86	14.00	10.65 – 18.25	30,910
	Montana	12.59	11.41	9.75 – 15.84	26,190
	Yellowstone County MSA	13.83	13.54	10.22 – 16.98	28,770
Slaughterers & butchers					
89802	U.S.	8.94	9.03	7.73 – 9.87	18,600
	Montana	9.51	10.77	6.85 – 11.53	19,780
Precision molders, shapers, casters & carvers, except jewelry & foundry					
89905	U.S.	11.12	10.22	7.91 – 13.13	23,130
	Montana	12.11	11.24	7.74 – 14.53	25,180
Precision detail design decorators & painters					
89911	U.S.	10.25	9.40	7.47 – 12.15	21,330
	Montana	7.14	7.00	6.09 – 7.88	14,850
Precision photographic process workers					
89914	U.S.	11.48	10.39	7.69 – 13.20	23,880
	Montana	9.97	8.26	7.03 – 12.19	20,730
Precision dental laboratory technicians					
89921	U.S.	14.04	12.34	9.33 – 16.64	29,200
	Yellowstone County MSA	13.15	14.10	11.01 – 15.50	27,340
All other precision workers					
89999	U.S.	12.29	10.85	8.12 – 15.00	25,570
	Montana	9.66	8.92	6.98 – 11.50	20,090
Machine tool cutting operators & tenders, metal & plastic					
91117	U.S.	13.10	11.78	9.22 – 16.31	27,250
	Montana	9.77	10.03	9.11 – 10.97	20,320
Machine forming operators & tenders, metal & plastic					
91321	U.S.	10.59	9.70	7.62 – 12.45	22,020
	Montana	8.63	8.30	6.87 – 10.38	17,950
Welding machine operators & tenders					
91705	U.S.	12.51	11.73	9.73 – 14.70	26,020
	Montana	12.22	12.33	10.54 – 14.16	25,430

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Metal fabricators, structural metal products					
91714	U.S.	12.45	11.57	9.28 – 14.73	25,890
	Montana	12.38	11.31	9.85 – 13.61	25,750
Plastic molding & casting machine operators & tenders					
91905	U.S.	8.99	8.58	7.07 – 10.26	18,690
	Montana	8.01	7.56	6.72 – 8.39	16,660
All other metal & plastic cutting, forming, fabricating or processing machine operators & tenders					
92198	U.S.	11.37	10.41	8.36 – 13.35	23,660
	Montana	11.73	12.75	7.86 – 14.78	24,400
Sawing machine setters & set-up operators					
92302	U.S.	10.53	9.73	8.02 – 11.59	21,900
	Montana	12.83	12.67	11.62 – 14.70	26,680
Head sawyers					
92305	U.S.	12.22	11.56	9.23 – 14.77	25,420
	Montana	12.99	13.53	11.64 – 14.73	27,020
Sawing machine operators & tenders					
92308	U.S.	9.50	9.11	7.40 – 11.05	19,750
	Montana	11.01	11.49	9.38 – 12.73	22,890
Woodworking machine setters & set-up operators, except sawing					
92311	U.S.	10.07	9.76	8.00 – 11.53	20,950
	Montana	10.52	10.27	8.05 – 12.68	21,890
Woodworking machine operators & tenders, except sawing					
92314	U.S.	9.30	9.03	7.34 – 10.80	19,350
	Montana	11.27	11.84	9.97 – 12.88	23,440
Offset lithographic press setters & set-up operators					
92512	U.S.	15.56	14.91	11.27 – 18.89	32,370
	Montana	10.78	10.37	8.69 – 12.77	22,420
	Yellowstone County MSA	11.24	10.45	9.27 – 14.14	23,380
Screen printing machine setters & set-up operators					
92524	U.S.	9.48	9.08	7.30 – 11.06	19,720
	Montana	8.72	9.00	7.32 – 10.06	18,140
Bindery machine setters & set-up operators					
92525	U.S.	12.39	11.70	8.89 – 15.65	25,760
	Montana	10.17	9.31	7.61 – 13.58	21,150
	Yellowstone County MSA	11.61	10.22	9.32 – 14.72	24,150
Typesetting & composing machine operators & tenders					
92541	U.S.	12.18	11.08	8.91 – 14.20	25,330
	Montana	9.61	9.52	8.46 – 10.32	19,990

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Printing press machine operators & tenders					
92543	U.S.	13.34	12.51	9.86 – 16.03	27,760
	Montana	10.86	11.35	7.03 – 14.09	22,590
Bindery machine operators & tenders					
92546	U.S.	10.22	9.27	7.23 – 12.31	21,270
	Montana	9.73	8.88	6.57 – 12.00	20,230
	Yellowstone County MSA	9.56	8.22	6.69 – 13.82	19,890
Sewing machine operators, garment					
92717	U.S.	7.42	7.09	5.99 – 8.43	15,420
	Montana	7.13	6.78	5.93 – 8.32	14,820
Sewing machine operators, nongarment					
92721	U.S.	8.53	8.17	6.67 – 9.84	17,740
	Montana	7.93	7.79	6.45 – 9.24	16,500
Laundry & dry-cleaning machine operators & tenders, except pressing					
92726	U.S.	7.45	7.05	5.98 – 8.40	15,490
	Montana	6.99	6.80	5.84 – 8.22	14,530
	Yellowstone County MSA	6.15	5.92	5.61 – 6.73	12,790
	Cascade County MSA	7.06	6.87	5.91 – 8.21	14,690
Pressing machine operators & tenders, textile, garment & related materials					
92728	U.S.	7.51	7.28	6.10 – 8.56	15,620
	Montana	6.77	6.64	5.90 – 7.76	14,090
	Yellowstone County MSA	6.99	6.72	6.13 – 8.04	14,540
	Cascade County MSA	7.34	7.31	6.58 – 8.05	15,270
Motion picture projectionists					
92905	U.S.	10.27	7.41	5.92 – 11.94	21,370
	Montana	7.07	7.03	6.04 – 8.06	14,700
Photographic processing machine operators & tenders					
92908	U.S.	9.58	8.56	7.08 – 10.96	19,930
	Montana	9.38	8.25	7.05 – 10.29	19,520
	Yellowstone County MSA	8.91	8.55	7.42 – 10.18	18,520
Furnace, kiln, oven, drier, or kettle operators & tenders					
92923	U.S.	13.03	12.07	9.80 – 15.78	27,100
	Montana	12.03	11.62	8.22 – 15.47	25,020
Boiler operators & tenders, low pressure					
92926	U.S.	14.93	14.57	11.13 – 18.28	31,060
	Montana	12.23	12.00	10.92 – 13.75	25,430
Cutting & slicing machine operators & tenders					
92944	U.S.	10.79	10.30	8.08 – 12.89	22,450
	Montana	10.24	9.68	7.93 – 11.11	21,300

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Painters, transportation equipment					
92947	U.S.	15.17	14.00	10.86 – 18.95	31,560
	Montana	12.31	12.39	9.68 – 14.28	25,610
Coating, painting & spraying machine operators & tenders					
92953	U.S.	10.74	10.27	8.28 – 12.59	22,330
	Montana	8.90	7.86	6.47 – 10.19	18,520
Cementing & gluing machine operators & tenders					
92956	U.S.	10.31	9.96	7.79 – 12.46	21,450
	Montana	11.93	12.21	10.69 – 13.85	24,810
Cleaning, washing & pickling equipment operators & tenders					
92958	U.S.	10.89	10.05	8.01 – 12.89	22,660
	Montana	13.56	13.81	11.63 – 15.19	28,200
Separating, filtering, clarifying, precipitating & still machine operators & tenders					
92962	U.S.	14.87	14.23	10.85 – 18.84	30,930
	Montana	12.34	12.41	10.64 – 13.79	25,670
Crushing, grinding, mixing & blending machine operators & tenders					
92965	U.S.	11.92	11.23	8.91 – 14.30	24,780
	Montana	12.63	12.35	9.95 – 15.25	26,270
	Cascade County MSA	11.95	12.33	11.68 – 12.92	24,850
Extruding, forming, pressing & compacting machine setters & set-up operators					
92968	U.S.	12.21	11.70	9.58 – 14.09	25,400
	Montana	12.15	12.87	12.16 – 13.57	25,280
Extruding, forming, pressing & compacting machine operators & tenders					
92971	U.S.	11.41	10.94	8.83 – 13.49	23,730
	Montana	10.78	11.11	7.87 – 13.47	22,420
	Yellowstone County MSA	9.97	9.64	7.10 – 13.10	20,730
Packaging & filling machine operators & tenders					
92974	U.S.	10.43	9.64	7.52 – 12.56	21,700
	Montana	8.90	8.35	6.79 – 10.60	18,510
	Yellowstone County MSA	8.92	9.04	7.19 – 10.53	18,550
	Cascade County MSA	11.16	11.95	9.77 – 12.76	23,200
All other machine operators & tenders					
92998	U.S.	11.52	10.43	7.85 – 14.02	23,950
	Montana	15.16	13.14	9.64 – 15.91	31,520
Electrical & electronic equipment assemblers, precision					
93114	U.S.	11.25	10.45	8.35 – 13.41	23,400
	Montana	7.33	7.15	5.96 – 8.31	15,240

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Welders & cutters					
93914	U.S.	13.18	12.41	10.31 – 15.40	27,420
	Montana	13.81	12.83	9.94 – 17.10	28,730
	Yellowstone County MSA	11.78	11.49	9.35 – 14.11	24,500
Pressers, hand					
93921	U.S.	7.30	7.09	5.97 – 8.29	15,180
	Montana	7.57	7.55	6.79 – 8.31	15,740
Cutters & trimmers, hand					
93926	U.S.	8.89	8.23	6.67 – 10.35	18,490
	Montana	8.19	8.36	6.22 – 9.99	17,040
Meat, poultry & fish cutters & trimmers, hand					
93938	U.S.	7.99	7.82	6.86 – 8.84	16,610
	Montana	7.64	7.58	6.76 – 8.39	15,900
	Yellowstone County MSA	7.65	7.54	6.48 – 8.44	15,910
Metal pourers & casters, basic shapes					
93941	U.S.	12.39	11.71	9.77 – 14.05	25,770
	Montana	7.14	6.95	5.87 – 8.40	14,860
Painting, coating & decorating workers, hand					
93947	U.S.	9.84	9.16	7.17 – 11.28	20,460
	Montana	9.48	9.58	7.54 – 11.17	19,720
	Yellowstone County MSA	10.88	10.83	9.65 – 11.68	22,620
	Cascade County MSA	9.03	10.89	5.68 – 11.65	18,790
Grinding & polishing workers, hand					
93953	U.S.	10.69	9.83	7.80 – 12.38	22,240
	Montana	7.88	7.76	6.63 – 8.98	16,390
Assemblers & fabricators, except machine, electrical, electronic & precision					
93956	U.S.	10.53	9.50	7.49 – 12.18	21,910
	Montana	8.30	7.96	6.49 – 9.79	17,260
	Yellowstone County MSA	8.54	7.75	6.37 – 9.47	17,750
	Cascade County MSA	8.42	7.80	6.36 – 10.80	17,510
All other hand workers					
93999	U.S.	9.48	7.98	6.38 – 10.65	19,720
	Montana	7.36	6.88	6.02 – 8.42	15,310
	Yellowstone County MSA	7.43	7.41	6.38 – 8.41	15,450
Water & liquid waste treatment plant & system operators					
95002	U.S.	14.76	14.26	11.16 – 17.64	30,690
	Montana	13.05	13.10	10.56 – 15.23	27,130
	Cascade County MSA	14.78	14.77	12.83 – 17.18	30,750

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Gaugers					
95017	U.S.	17.40	18.41	12.29 – 21.92	36,190
	Montana	16.20	16.68	14.15 – 18.66	33,690
Auxiliary equipment operators, power					
95023	U.S.	20.75	20.98	17.58 – 23.67	43,150
	Montana	20.30	19.64	17.45 – 23.27	42,220
Power distributors & dispatchers					
95028	U.S.	22.38	21.97	17.96 – 27.31	46,540
	Montana	28.33	31.47	25.35 – 37.62	58,920
Stationary engineers					
95032	U.S.	18.93	18.40	15.17 – 22.30	39,360
	Montana	17.48	16.84	14.11 – 20.54	36,370
All other plant & system operators					
95099	U.S.	12.38	10.86	7.86 – 15.89	25,750
	Montana	14.51	13.91	10.46 – 18.59	30,180
Truck drivers, heavy or tractor trailer					
97102	U.S.	14.08	13.45	10.67 – 16.97	29,290
	Montana	13.54	12.78	10.71 – 16.49	28,160
	Yellowstone County MSA	13.30	12.90	10.32 – 15.88	27,650
	Cascade County MSA	13.04	12.79	11.03 – 14.81	27,120
Truck drivers, light, include delivery & route workers					
97105	U.S.	10.58	9.61	7.16 – 12.81	22,010
	Montana	9.51	8.51	6.23 – 11.38	19,790
	Yellowstone County MSA	10.97	10.14	6.58 – 14.28	22,820
	Cascade County MSA	7.10	6.15	5.62 – 8.02	14,780
Bus drivers, except school					
97108	U.S.	12.50	11.72	8.58 – 16.04	26,000
	Montana	9.08	8.88	7.20 – 10.64	18,890
Bus drivers, school					
97111	U.S.	9.34	9.05	6.33 – 11.44	19,420
	Montana	9.43	9.67	6.59 – 11.65	19,610
	Yellowstone County MSA	9.96	10.82	8.04 – 11.59	20,720
Taxi drivers & chauffeurs					
97114	U.S.	8.29	7.48	6.02 – 9.79	17,250
	Montana	6.49	6.22	5.63 – 7.42	13,500
Driver/sales workers					
97117	U.S.	10.33	9.29	6.13 – 13.06	21,490
	Montana	9.19	8.94	5.80 – 12.13	19,120
	Yellowstone County MSA	8.88	7.16	5.69 – 12.60	18,470
	Cascade County MSA	12.31	12.23	11.30 – 13.15	25,610

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
All other motor vehicle operators					
97199	U.S.	10.33	8.82	6.44 – 13.31	21,490
	Montana	12.36	12.60	8.15 – 16.44	25,700
Locomotive engineers					
97305	U.S.	20.53	19.14	15.07 – 23.81	42,690
	Montana	25.22	22.75	18.56 – 33.51	52,460
Rail yard engineers, dinkey operators & hostlers					
97308	U.S.	17.26	17.17	14.81 – 19.45	35,910
	Montana	17.78	16.59	14.76 – 18.69	36,980
Aircraft pilots & flight engineers					
97702	U.S.		annual wage only		80,700
	Montana		annual wage only		37,640
	Yellowstone County MSA		annual wage only		40,610
Service station attendants					
97805	U.S.	7.34	6.90	5.90 – 8.23	15,270
	Montana	7.26	7.13	6.17 – 8.15	15,100
	Yellowstone County MSA	7.56	7.48	6.60 – 8.36	15,710
	Cascade County MSA	6.64	6.09	5.65 – 7.21	13,820
Parking lot attendants					
97808	U.S.	7.22	6.69	5.83 – 8.19	15,030
	Montana	6.86	6.55	5.74 – 8.18	14,270
All other transportation & related workers					
97899	U.S.	12.92	11.41	7.97 – 17.43	26,880
	Montana	14.19	14.78	12.10 – 17.19	29,520
Wellhead pumpers					
97911	U.S.	15.81	16.16	11.42 – 19.58	32,880
	Montana	17.43	17.73	16.27 – 19.18	36,260
	Yellowstone County MSA	17.88	17.92	16.40 – 19.38	37,180
Gas compressor operators					
97921	U.S.	17.91	18.57	15.07 – 21.78	37,250
	Montana	17.40	17.74	16.73 – 18.74	36,190
Excavating & loading machine operators					
97923	U.S.	14.44	13.02	10.69 – 17.11	30,020
	Montana	14.66	13.93	11.90 – 17.97	30,490
	Yellowstone County MSA	12.83	12.21	10.58 – 15.18	26,680
	Cascade County MSA	12.63	12.27	11.45 – 13.09	26,270
Dragline operators					
97926	U.S.	14.52	13.44	10.38 – 17.74	30,190
	Montana	20.84	21.44	18.93 – 23.34	43,340

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Grader, bulldozer & scraper operators					
97938	U.S.	14.32	12.94	10.64 – 17.07	29,780
	Montana	14.99	14.96	12.55 – 17.61	31,190
Crane & tower operators					
97944	U.S.	15.46	14.67	11.70 – 18.40	32,150
	Montana	14.06	14.00	10.51 – 16.11	29,250
	Yellowstone County MSA	12.61	10.93	9.64 – 15.42	26,230
Industrial truck & tractor operators					
97947	U.S.	12.08	11.23	9.22 – 14.31	25,130
	Montana	11.51	11.63	9.15 – 13.26	23,940
	Yellowstone County MSA	12.38	12.91	8.81 – 14.84	25,740
	Cascade County MSA	10.54	10.02	8.04 – 12.53	21,920
Conveyor operators & tenders					
97951	U.S.	11.04	10.48	8.00 – 13.35	22,950
	Montana	10.06	9.70	7.88 – 12.08	20,920
	Cascade County MSA	11.93	11.86	11.40 – 12.58	24,810
Pump operators					
97953	U.S.	15.78	15.56	11.17 – 20.46	32,820
	Montana	12.72	12.34	9.88 – 13.26	26,450
Operating engineers					
97956	U.S.	18.07	16.95	12.72 – 22.34	37,590
	Montana	14.73	14.61	11.80 – 17.05	30,640
All other material-moving equipment operators					
97989	U.S.	12.27	11.01	8.80 – 14.57	25,520
	Montana	11.39	11.05	8.74 – 13.29	23,690
All other transportation & material-moving equipment operators					
97999	U.S.	12.72	11.83	8.26 – 16.67	26,460
	Montana	11.22	8.61	7.25 – 15.05	23,340
Helpers, mechanics & repairers					
98102	U.S.	9.72	8.76	6.94 – 11.31	20,220
	Montana	8.54	7.87	6.51 – 9.67	17,760
	Yellowstone County MSA	8.32	8.44	6.61 – 9.77	17,310
	Cascade County MSA	7.25	7.03	5.98 – 8.19	15,070
Helpers, brick & stonemasons & hard tile setters					
98311	U.S.	11.67	10.31	8.43 – 13.58	24,280
	Montana	13.46	13.95	11.38 – 15.14	28,000
	Yellowstone County MSA	11.04	10.83	9.75 – 12.22	22,960

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Helpers, carpenters & related workers					
98312	U.S.	10.08	9.40	7.53 – 11.34	20,960
	Montana	9.34	9.94	6.63 – 10.87	19,420
	Yellowstone County MSA	8.78	9.02	7.50 – 9.81	18,260
	Cascade County MSA	7.54	6.19	5.67 – 6.70	15,690
Helpers, electricians & power-line transmission installers					
98313	U.S.	10.09	9.35	7.64 – 11.24	21,000
	Montana	13.22	11.87	11.08 – 15.07	27,490
Helpers, painters, paperhangers, plasterers & stucco masons					
98314	U.S.	9.73	8.78	7.11 – 11.00	20,250
	Montana	11.15	10.95	10.53 – 11.37	23,190
Helpers, plumbers, pipefitters & steamfitters					
98315	U.S.	10.11	9.39	7.52 – 11.32	21,020
	Montana	9.85	9.53	7.84 – 10.82	20,480
	Cascade County MSA	10.00	9.35	7.96 – 11.11	20,800
Helpers, roofers					
98316	U.S.	8.53	8.13	6.85 – 9.72	17,740
	Montana	8.46	8.41	7.27 – 9.45	17,590
	Yellowstone County MSA	8.05	7.90	7.04 – 9.09	16,740
Helpers, all other construction trades workers					
98319	U.S.	10.41	9.28	7.21 – 12.11	21,650
	Montana	8.93	8.62	7.51 – 9.56	18,580
Helpers, extractive workers					
98323	U.S.	10.45	9.93	7.78 – 12.12	21,740
	Montana	7.05	6.93	5.75 – 8.19	14,660
Machine feeders & offbearers					
98502	U.S.	9.61	9.04	7.28 – 11.21	19,990
	Montana	9.53	9.47	7.48 – 11.69	19,810
Refuse & recyclable material collectors					
98705	U.S.	11.28	10.51	7.81 – 13.79	23,460
	Montana	10.43	11.22	7.32 – 13.42	21,690
All other freight, stock, and material movers, hand					
98799	U.S.	9.50	8.78	7.05 – 11.04	19,770
	Montana	8.85	8.38	6.94 – 10.56	18,420
	Yellowstone County MSA	9.60	9.42	7.43 – 11.79	19,970
	Cascade County MSA	8.74	8.28	6.62 – 10.78	18,190

1998 Montana Occupational Wage Survey

Occupational Title and Code	MSA or Area	Mean Wage	Median Wage	Middle Range	Annual Average
Hand packers & packagers					
98902	U.S.	7.58	6.99	5.90 – 8.65	15,770
	Montana	6.86	6.43	5.73 – 7.83	14,270
	Yellowstone County MSA	7.31	6.74	5.85 – 8.17	15,210
	Cascade County MSA	7.04	6.53	5.70 – 8.37	14,630
Vehicle washers & equipment cleaners					
98905	U.S.	7.70	6.99	5.89 – 8.60	16,020
	Montana	6.60	6.06	5.64 – 7.38	13,730
	Yellowstone County MSA	6.70	6.21	5.71 – 7.41	13,930
	Cascade County MSA	6.41	6.11	5.67 – 7.35	13,330
All other helpers, laborers & material movers, hand					
98999	U.S.	9.64	8.59	6.80 – 11.03	20,050
	Montana	9.28	8.44	6.83 – 11.51	19,310
	Yellowstone County MSA	9.34	8.45	6.86 – 11.57	19,420
	Cascade County MSA	10.34	10.88	7.35 – 12.57	21,510

Staff and Administrative Specialty Managerial Occupations

13002 - Financial Managers - Plan, organize, direct, control, or coordinate the financial activities of an organization. Include managers who negotiate general policy with financial or other institutions or managers in banks, or similar financial institutions, who advise on credit and investment policy.

13005 - Personnel, Training, and Labor Relations Managers - Plan, organize, direct, control, or coordinate the personnel, training, or labor relations activities of an organization. Work may involve establishing employer/employee relations policies; directing the selection, training, and evaluation of employees; administering benefits, safety, and recreation programs; developing wage and salary schedules; coordinating collective bargaining activities; and advising on labor contract administration.

13008 - Purchasing Managers - Plan, organize, direct, control, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, or services. Include Wholesale or Retail Trade Merchandising Managers.

13011 - Marketing, Advertising, and Public Relations Managers - Formulate marketing policies, direct sales activities, and plan, organize, and direct advertising and public relations activities for a department, an entire organization, or on an account basis.

13014 - Administrative Services Managers - Plan, organize, direct, control, or coordinate the supportive services department of a business, agency, or organization. Managers who spend less than 80 percent of their time in administrative services should be classified in another appropriate managerial category. Include Property Managers and Contract Administrators. Exclude Procurement Managers.

13017 - Engineering, Mathematical, and Natural Sciences Managers - Plan, organize, direct, or coordinate activities in such fields as architecture, electronic data processing, engineering, life sciences, physical sciences, statistics, and systems analysis. These persons spend the greatest portion of their time in managerial work for which a background consistent with that described for engineers, mathematicians, or natural scientists is required.

Line and Middle Management Industry Specific Managerial Occupations

15002 - Postmasters and Mail Superintendents - Direct and coordinate operational, administrative, management, and supportive services of a U.S. post office; or coordinate activities of workers engaged in postal and related work in assigned post office.

15005 - Education Administrators - Plan, organize, direct, control, or coordinate the educational activities of colleges and universities; elementary, secondary, or postsecondary schools; vocational or technical schools; or training and instructional organizations (or programs) in private business or other agencies.

15008 - Medicine and Health Services Managers - Plan, organize, direct, control, or coordinate medicine and health services in establishments such as hospitals, clinics, or similar organizations.

15011 - Property and Real Estate Managers and Administrators - Plan, organize, direct, control, or coordinate buying, selling, or leasing activities of real estate properties for clients or employer. Include managers of rented or leased housing units, buildings, or land (including rights-of-way). Exclude workers whose duties are not primarily managerial. Workers who are engaged primarily in direct buying, selling, or renting of real estate should be reported as Sales Workers.

15014 - Industrial Production Managers - Plan, organize, direct, control, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

15017 - Construction Managers - Plan, organize, direct, control, or coordinate, usually through subordinate supervisory personnel, activities concerned with the construction and maintenance of structures, facilities, and systems. Include specialized construction fields such as carpentry or plumbing. General Managers of large construction contracting firms should be reported as General Managers and Top Executives.

15021 - Mining, Quarrying, and Oil and Gas Well Drilling Managers - Plan, organize, direct, control, or coordinate, usually through subordinate supervisory personnel, the operations of mines, quarries, oil or gas wells, or other similar operations that extract natural deposits.

15023 - Communications, Transportation, and Utilities Operations Managers - Plan, organize, direct, control, or coordinate activities related to: Communications by telephone, telegraph, radio, or television; transporting people or goods by air, highway, railway, water, or pipeline; managing transportation facilities, such as airports, harbors, or terminals; managing warehousing and storage facilities; or supplying electricity, gas, water, steam, or sanitation services. General Managers of large establishments or operations should be reported as General Managers and Top Executives.

15026 - Food Service and Lodging Managers - Plan, organize, direct, control, or coordinate activities of an organization or department that serves food and beverages and/or provides lodging and other accommodations. Include Food and Beverage Directors.

Other Managerial and Administrative Occupations

19002 - Public Administration Chief Executives, Legislators, and General Administrators - Formulate and establish government policy and develop federal, state, or local laws, rules, and regulations. General Administrators who do not have overall responsibility for the state or a local government entity (e.g., county, city, town, or township) should be reported as General Managers and Top Executives.

19005 - General Managers and Top Executives - Top and middle managers whose duties and responsibilities are too diverse and general in nature to be classified in any functional or line area of management and administration. These managers generally work through departmental or subordinate executives.

19999 - All Other Managers and Administrators - All other managers and administrators not classified separately above.

Management Support Occupations

Accountants, Auditors, and Other Financial Specialists

21102 - Insurance Underwriters - Review individual applications for insurance to evaluate degree of risk involved and determine acceptance of applications.

21105 - Credit Analysts - Analyze current credit data and financial statements of individuals or firms to determine the degree of risk involved in extending credit or lending money. Prepare reports with this credit information for use in decision-making.

21108 - Loan Officers and Counselors - Evaluate, authorize, or recommend approval of commercial, real estate, or credit loans. Advise borrowers on financial status and methods of payments. Include Mortgage Loan Officers or Agents, Collection Analysts, and Loan Servicing Officers.

21111 - Tax Preparers - Prepare tax returns for individuals or small businesses but do not have the background or responsibilities of an accredited accountant or certified public accountant. May work for established tax return firm.

21114 - Accountants and Auditors - Examine, analyze, and interpret accounting records for the purpose of giving advice or preparing statements. Install or advise on systems of recording costs or other financial and budgetary data.

21117 - Budget Analysts - Examine budget estimates for completeness, accuracy, and conformance with procedures and regulations. Examine requests for budget revisions, recommend approval or denial, and draft correspondence. Analyze monthly department budgeting and accounting reports for the purpose of maintaining expenditure controls. Provide technical assistance to officials in the preparation of budgets.

21199 - All Other Financial Specialists - All other financial specialists not classified separately above.

Purchasing Agents and Buyers

21302 - Wholesale and Retail Buyers, Except Farm Products - Buy merchandise or commodities (other than farm products) for resale to consumers at the wholesale or retail level, including both durable and nondurable goods. Analyze past buying trends, sales records, price, and quality of merchandise to determine value and yield. Select, order, and authorize payment for merchandise according to contractual agreements. May conduct meetings with sales personnel and introduce new products. Include Assistant Buyers.

21305 - Purchasing Agents and Buyers, Farm Products - Purchase farm products either for further processing or resale. Include Christmas Tree Contractors, Grain Brokers and Market Operators, Grain Buyers, and Tobacco Buyers.

21308 - Purchasing Agents, Except Wholesale, Retail, and Farm Products - Purchase raw or semifinished materials for manufacturing. Purchase machinery, equipment, tools, parts, supplies, or services necessary for the operation of an establishment. Include Contract Specialists, Field Contractors, Purchasers, Price Analysts, Tooling Coordinators, and Media Buyers.

Personnel, Training, Labor Relations Specialists, and Related Occupations

21505 - Special Agents, Insurance - Recruit independent insurance sales agents in field and maintain contact between them and home office. Advise agents on matters pertaining to conduct of business such as cancellations, overdue accounts, technical problems, claims procedures, new business contacts, and new products. May gather information for underwriter.

21508 – Employment Interviewers, Private or Public Employment Service - Interview job applicants in employment office and refer them to prospective employers for consideration. Search application files, notify selected applicants of job openings, and refer qualified applicants to prospective employers. Contact employers to verify referral results. Record and evaluate various pertinent data.

21511 - Personnel, Training, and Labor Relations Specialists - Conduct programs of recruitment, selection, placement, training, promotion, welfare, safety, compensation, or separation of employees. May specialize in specific areas such as labor-management relations, counseling, job analysis, position classification, training, or compensation. Exclude occupations in personnel research and in administration of testing and counseling programs for which a background in psychology is required. Exclude Employment Interviewers, Private or Public Employment Service.

Other Management Support Occupations

21902 - Cost Estimators - Prepare cost estimates for product manufacturing, construction projects, or services, to aid management in bidding on or determining price of product or service. May specialize according to particular service performed or type of product manufactured.

21905 - Management Analysts - Review, analyze, and suggest improvements to business and organizational systems to assist management in operating more efficiently and effectively. Conduct organizational studies and evaluations, design systems and procedures, conduct work simplification and measurement studies, and prepare operations and procedures manuals. Exclude Computer Systems Analysts.

21908 - Construction and Building Inspectors - Inspect new or remodeled construction to determine its soundness and compliance to specifications, building codes, and other regulations. Inspections may be general in nature or may be limited to a specific area, such as electrical systems or elevators.

21921 - Claims Examiners, Property and Casualty Insurance - Review settled insurance claims to determine that payments and settlements have been made in accordance with company practices and procedures, insuring that adjusters have followed proper methods. Report overpayments, underpayments, and other irregularities. Confer with legal counsel on claims requiring litigation.

21999 - All Other Management Support Occupations - All other management support workers not classified separately above.

Engineers

22108 - Mining Engineers, Including Mine Safety - Determine the location and plan the extraction of coal, metallic ores, nonmetallic minerals, and building materials, such as stone and gravel. Work involves conducting preliminary surveys of deposits or undeveloped mines and planning their development; examining deposits or mines to determine whether they can be worked at a profit; making geological and topographical surveys; evolving methods of mining best suited to character, type, and size of deposits; and supervising mining operations.

22111 - Petroleum Engineers - Devise methods to improve oil and gas well production and determine the need for new or modified tool designs. Oversee drilling and offer technical advice to achieve economical and satisfactory progress.

22114 - Chemical Engineers - Design chemical plant equipment and devise processes for manufacturing chemicals and products such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp by applying principles and technology of chemistry, physics, and engineering.

22121 - Civil Engineers, Including Traffic - Perform engineering duties in planning, designing, and overseeing construction and maintenance of structures and facilities such as roads, railroads, airports, bridges, harbors, channels, dams, irrigation projects, pipelines, power plants, water and sewage systems, and waste disposal units. Include Traffic Engineers who specialize in studying vehicular and pedestrian traffic conditions.

22126 - Electrical and Electronic Engineers - Design, develop, test, and supervise the manufacturing and installation of electrical and electronic equipment, components, or systems for commercial, industrial, military, or scientific use. Exclude Computer Engineers.

22127 - Computer Engineers - Analyze data processing requirements to plan EDP system to provide system capabilities required for projected workloads. Plan layout and installation of new system or modification of existing system. May set up and control analog or hybrid computer systems to solve scientific and engineering problems.

22128 - Industrial Engineers, Except Safety - Perform engineering duties in planning and overseeing the utilization of production facilities and personnel in department or other subdivision of industrial establishment. Plan equipment layout, workflow, and accident prevention measures to maintain efficient and safe utilization of plant facilities. Plan and oversee work, study, and training programs to promote efficient worker utilization. Develop and oversee quality control, inventory control, and production record systems. Exclude Industrial Product Safety Engineers.

22132 - Safety Engineers, Except Mining - Apply knowledge of industrial processes, mechanics, chemistry, psychology, and industrial health and safety laws to prevent or correct injurious products or environmental conditions and minimize effects of human traits or product characteristics that create hazards to life and property or reduce worker morale and efficiency. Include Industrial Product Safety Engineers.

22135 - Mechanical Engineers - Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of such equipment as centralized heat, gas, water, and steam systems.

22199 - All Other Engineers - All other engineers not classified separately above.

Architects and Surveying and Mapping Scientists

22302 - Architects, Except Landscape and Marine - Plan and design structures, such as private residences, office buildings, theaters, factories, and other structural property.

22308 - Landscape Architects - Plan and design land areas for such projects as parks and other recreational facilities, airports, highways, hospitals, schools, land subdivisions, and commercial, industrial, and residential sites.

22311 - Surveyors and Mapping Scientists - Use surveying, engineering, and scientific data to determine and identify fixed points or boundaries, and prepare maps for legal and design purposes. Provide data relevant to the shape, contour, gravitation, location, or dimension of land or land features for construction, mining, land evaluation, or other purposes.

Engineering and Related Technicians and Technologists

22502 – Civil Engineering Technicians and Technologists – Apply theory and principles of civil engineering in planning, designing and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.

22505 - Electrical and Electronic Engineering Technicians and Technologists - Apply electrical and electronic theory and related knowledge to design, build, test, repair, and modify developmental, experimental, or production electrical equipment in industrial or commercial plants for subsequent use by engineering personnel in making engineering design and evaluation decisions.

22511 - Mechanical Engineering Technicians and Technologists - Apply theory and principles of mechanical engineering to develop and test machinery and equipment under direction of engineering staff or physical scientists.

22514 - Drafters - Prepare working plans and detail drawings from rough or detailed sketches and notes for engineering or manufacturing purposes according to specified dimensions. Utilize knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete drawings. May use computer-assisted drafting (CAD) equipment and software.

22521 - Surveying and Mapping Technicians - Perform surveying and mapping duties to obtain data pertaining to angles, elevations, points, and contours used for construction, mapmaking, boundary location, mining, or other purposes. Calculate mapmaking information from field notes using reference tables. Draw maps of geographical areas from source data such as surveying notes, aerial photography, or other maps to show natural and constructed features, political boundaries, and other features. Draw topographical maps from aerial photographs or verify accuracy and completeness of topographical maps. Exclude Surveyors, Cartographers, and Geodesists.

22599 - All Other Engineering and Related Technicians and Technologists - All other engineering and related technicians and technologists not classified separately above.

Natural Scientists and Related Occupations

Physical Scientists

24105 - Chemists, Except Biochemists - Conduct qualitative and quantitative chemical analyses or chemical experiments in laboratories for quality or process control or to develop new products or knowledge.

24108 - Atmospheric and Space Scientists - Investigate atmospheric phenomena and interpret meteorological data gathered by surface and air stations, satellites, and radar to prepare reports and forecasts for public and other uses. Include weather analysts and forecasters who work for radio and TV stations and whose functions require the detailed knowledge of a meteorologist.

24111 - Geologists, Geophysicists, and Oceanographers - Geologists: Study composition, structure, and history of the earth's crust; examine rocks, minerals, and fossil remains to identify and determine the sequence of processes affecting the development of the earth; apply knowledge of chemistry, physics, biology, and mathematics to explain these phenomena and to help locate mineral and petroleum deposits and underground water resources; prepare geologic reports and maps; and interpret research data to recommend further study or action. Geophysicists: Study physical aspects of the earth, including the atmosphere and hydrosphere; investigate and measure seismic, gravitational, electrical, thermal, and magnetic forces affecting the earth, utilizing principles of physics, mathematics, and chemistry. Oceanographers: Study topographical features, rock and sediment of the ocean bottom, and physical aspects of oceans, such as density, temperature, and sound.

24199 - All Other Physical Scientists - All other physical scientists not classified separately above.

Life Scientists

24302 - Foresters and Conservation Scientists - Plan, develop, and control environmental factors affecting forests, rangeland, and farmland and their resources for economic and recreational purposes through activities such as researching soil erosion, conducting fire prevention programs, reforestation, and preservation of natural resources.

24305 - Agricultural and Food Scientists - Research problems related to agriculture, animal husbandry, and horticulture, including the development of improved methods of cultivation, the processing, handling, and storing of products, and related activities.

24308 - Biological Scientists - Research problems dealing with life processes. Include Biologists, Biochemists, Biophysicists, Pathologists, Bacteriologists, Toxicologists, and Zoologists. Exclude Medical and Agricultural Scientists.

Physical and Life Science Technicians and Technologists

24502 - Biological, Agricultural, and Food Technicians and Technologists, Except Health - Assist scientists in laboratory and production activities by performing tasks necessary to experiment, test, and develop new and improved methods in production, preservation, and processing of plant and animal life.

24505 - Chemical Technicians and Technologists, Except Health - Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for purposes such as research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences.

24511 - Petroleum Technicians and Technologists - Assist scientists in the use of electrical, sonic, or nuclear measuring instruments in both laboratory and production activities to obtain data indicating potential sources of metallic ore, gas, or petroleum. Analyze mud and drill cuttings to determine petroleum and mineral content and physical characteristics. Chart pressure, temperature, and other characteristics of oil and gas wells, boreholes, or producing wells. Investigate and collect information concerning oil well drilling operations, geological and geophysical prospecting, and land and lease contracts from other oil fields that lead to the possible discovery of new oil fields.

24599 - All Other Physical and Life Science Technicians and Technologists - All other physical and life science technicians and technologists not classified separately above.

Computer, Mathematical, Operations Research, and Related Occupations

Computer Scientists and Related Occupations

25102 - Systems Analysts, Electronic Data Processing - Analyze business, scientific, and technical problems for application to electronic data processing systems. Exclude persons working primarily as Engineers, Mathematicians, or Scientists.

25103 - Database Administrators - Coordinate physical changes to computer databases and code, test, and implement the database applying knowledge of database management systems. May design logical and physical databases and coordinate database development as part of a project team.

25104 - Computer Support Specialists - Provide technical assistance and training to computer system users. Investigate and resolve computer software and hardware problems of users. Answer clients' inquiries in person and via telephone concerning the use of computer hardware and software, including printing, word processing, programming languages, electronic mail, and operating systems.

25105 - Computer Programmers - Convert project specifications and statements of problems and procedures to detailed logical flowcharts for coding into computer language. Develop and write computer programs to store, locate, and retrieve specific documents, data, and information.

25108 - Computer Programmer Aides - Assist Computer Programmers or Systems Analysts by performing computer-related tasks such as entering completed programs for conversion to machine instructions, writing simple programs to retrieve data, and other duties to assist in the processing of data or controlling of industrial processes.

25199 - All Other Computer Scientists - All other computer scientists not classified separately above.

Mathematical Scientists and Related Occupations

25302 - Operations and Systems Researchers and Analysts, Except Computer - Conduct analyses of management and operational problems in terms of management information and concepts. Formulate mathematical or simulation models of the problem for solution by computer or other method. May develop and supply time and cost networks such as program evaluation and review techniques.

25312 - Statisticians - Plan surveys and collect, organize, interpret, summarize, and analyze numerical data, applying statistical theory and methods to provide usable information in scientific, business, economic, and other fields. Data derived from surveys may represent either complete enumeration or statistical samples. Include Mathematical Statisticians who are engaged in the development of mathematical theory associated with the application of statistical techniques.

25315 - Financial Analysts, Statistical - Conduct statistical analyses of information affecting investment programs of public or private institutions and private individuals.

Social Scientists and Other Social, Recreational, and Religious Occupations

Social Scientists, Including Urban and Regional Planners

27102 - Economists, Including Market Research Analysts - Economists: Conduct research, prepare reports, and formulate plans to aid in solution of economic problems arising from production and distribution of goods and services. Market Research Analysts: Research market conditions in local, regional, or national area to determine potential sales of a product or service; examine and analyze statistical data on past sales and wholesale or retail trade trends to forecast future sales trends.

27105 - Urban and Regional Planners - Develop comprehensive plans and programs for use of land and physical facilities of cities, counties, and metropolitan areas.

27108 - Psychologists - Collect, interpret, and apply scientific data relating to human behavior and mental processes. Activities are in either applied fields of psychology or in basic science fields and research. Include occupations in personnel research and in administration of testing and counseling programs. Exclude Psychiatrists.

27199 - All Other Social Scientists - All other social scientists not classified separately above.

Other Social Science Related Occupations

27302 - Social Workers, Medical and Psychiatric - Counsel and aid individuals and families with problems that may arise during or following the recovery from physical or mental illness by providing supportive services designed to help the persons understand, accept, and follow medical recommendations. Include Chemical Dependency Counselors.

27305 - Social Workers, Except Medical and Psychiatric - Counsel and aid individuals and families requiring social service assistance. Include Community Organization Social Workers who plan, organize, and work with community groups to solve problems. Exclude Chemical Dependency Social Workers.

27307 - Residential Counselors - Coordinate activities for residents of care and treatment institutions, boarding schools, college fraternities or sororities, children homes, or similar establishments. Work includes developing or assisting in the development of program plans for individuals, maintaining household records, and assigning rooms. Counsel residents in identifying and resolving social or other problems. Order supplies and determine need for maintenance, repairs, and furnishings.

27308 - Human Services Workers - Assist Social Group Workers and Caseworkers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse and human relationships. Aid families and clients in obtaining information on the use of social and community services. May recommend additional services. Exclude Residential Counselors and Psychiatric Technicians.

27311 - Recreation Workers - Conduct recreation activities with groups in public, private, or volunteer agencies or recreation facilities. Organize and promote activities such as arts and crafts, sports, games, music, dramatics, social recreation, camping, and hobbies, taking into account the needs and interests of individual members.

Religious Workers

27502 - Clergy - Conduct religious worship and perform other spiritual functions associated with beliefs and practices of religious faith or denomination as delegated by ordinance, license, or other authorization. Provide spiritual and moral guidance and assistance to members.

27505 - Directors, Religious Activities and Education - Direct and coordinate activities of a denominational group to meet religious needs of students. Plan, organize, and direct church school programs designed to promote religious education among church membership. Provide counseling and guidance relative to marital, health, financial, and religious problems.

Lawyers and Related Occupations

28102 - Judges and Magistrates - Judges: Arbitrate, advise, and administer justice in a court of law. Sentence defendant in criminal cases according to statutes of state or federal government. May determine liability of defendant in civil cases. Magistrates: Adjudicate criminal cases not involving penitentiary sentences and civil cases concerning damages below a sum specified by state law. May issue marriage licenses and perform wedding ceremonies.

28105 - Adjudicators, Hearings Officers, and Judicial Reviewers - Conduct hearings to review and decide claims filed by the government against individuals or organizations, or individual eligibility issues concerning social programs, disability, or unemployment benefits. Determine the existence and the amount of liability; recommend the acceptance or rejection of claims, or compromise settlements according to laws, regulations, policies, and precedent decisions. Confer with persons or organizations involved and prepare written decisions.

28108 - Lawyers - Conduct criminal and civil lawsuits, draw up legal documents, advise clients as to legal rights, and practice other phases of law. May represent client in court or before quasi-judicial or administrative agencies of government. May specialize in a single area of law, such as patent law, corporate law, or criminal law.

Legal Assistants and Technicians, Except Clerical

28302 - Law Clerks - Research legal data for brief or argument based on statutory law or decisions. Search for and study legal records and documents to obtain data applicable to case under consideration. Prepare rough drafts of briefs or arguments. File pleadings for firm with court clerk. Serve copies of pleading on opposing counsel. Prepare affidavits of documents and keep document file and correspondence of cases.

28305 - Paralegal Personnel - Assist lawyers by researching law, investigating facts, and preparing legal documents. May gather research data for use as evidence to formulate defense or to initiate legal action. These workers are career professionals, usually having either a four-year college degree or a degree from an institute specializing in the paralegal profession.

28308 - Title Searchers - Compile list of mortgages, deeds, contracts, judgments, and other instruments (chain) pertaining to title by searching public and private records of real estate or title insurance company.

28311 - Title Examiners and Abstractors - Title Examiners: Search public records and examine titles to determine legal condition of property title. Copy or summarize (abstracts) recorded documents which affect condition of title to property (e.g., mortgages, trust deeds, and contracts). May prepare and issue policy that guarantees legality of title. Abstractors: Summarize pertinent legal or insurance details or sections of statutes or case law from reference books for purpose of examination, proof, or ready reference. Search out titles to determine if title deed is correct.

28399 - All Other Legal Assistants and Technicians, Except Clerical - All other legal assistants and technicians not classified separately above.

Teachers, Educators, Librarians, and Related Occupations

Teachers - College, Junior College, University, Professional School, or Technical Institute

31114 - Nursing Instructors, Postsecondary - Demonstrate and teach patient care in classroom and clinical units to nursing students. Instruct students in principles and application of physical, biological, and psychological subjects related to nursing. Conduct and supervise laboratory experiments. Issue assignments, direct seminars, etc. Participate in planning curriculum with medical and nursing personnel and in evaluating and improving teaching and nursing practices. May specialize in specific subjects, such as anatomy or chemistry, or in a type of nursing activity, such as nursing of surgical patients.

31209 - All Other Physical Sciences Teachers, Postsecondary - Teach courses in the physical sciences, except chemistry and physics. Include teachers of subjects such as astronomy, atmospheric sciences, space sciences, and geology.

31214 - English Language and Literature Teachers, Postsecondary - Teach courses in English language and literature. Include teachers of linguistics, and of comparative literature taught in English.

31218 - Art, Drama, and Music Teachers, Postsecondary - Teach courses in visual and performing arts, such as: cinema, dance, drama, music, painting, sculpture, and theater.

31224 - Mathematical Sciences Teachers, Postsecondary - Teach courses in mathematics, applied mathematics, statistics, and actuarial science.

31226 - Computer Science Teachers, Postsecondary - Teach courses in computer and information science, including computer engineering, computer programming, and information systems theory.

31231 - Anthropology and Sociology Teachers, Postsecondary - Teach courses in anthropology and sociology.

31235 - History Teachers, Postsecondary - Teach courses in human history and historiography.

31242 - Business Teachers, Postsecondary - Teach courses in business administration and management, such as: accounting, finance, human resources, labor relations, marketing, and operations research.

31247 - Social Work Teachers, Postsecondary - Teach courses in social work.

31252 - Education Teachers, Postsecondary - Teach courses pertaining to education, such as: counseling, curriculum, guidance, instruction, teacher education, and teaching English as a second language.

31299 - All Other Postsecondary Teachers - All other postsecondary teachers not elsewhere classified.

Other Teachers and Instructors

31303 - Teachers, Preschool - Instruct children (normally up to 5 years of age) in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility. May be required to hold state certification.

31304 - Teachers, Kindergarten - Teach elemental natural and social science, personal hygiene, music, art, and literature to children from 4 to 6 years old. Promote physical, mental, and social development. May be required to hold state certification.

31305 - Teachers, Elementary School - Teach elementary pupils in public or private schools basic academic, social, and other formative skills. Exclude special education teachers of the handicapped.

31308 - Teachers, Secondary School - Instruct students in public or private schools in one or more subjects, such as English, mathematics, or social studies. May be designated according to subject matter specialty, such as Typing Instructors, Commercial Teachers, or English Teachers. Include vocational high school teachers.

31311 - Teachers, Special Education - Teach elementary and secondary school subjects to educationally and physically handicapped students. Include teachers who specialize and work with audibly and visually handicapped students and those who teach basic academic and life processes skills to the mentally retarded.

31314 - Teachers and Instructors, Vocational Education and Training - Teach or instruct vocational and/or occupational subjects at the post-secondary level (but at less than the baccalaureate) to students who have graduated or left high school. Subjects include business, secretarial science, data processing, trades, and practical nursing. Include correspondence school instructors, industrial, commercial and government training instructors, and adult education teachers and instructors who prepare persons to operate industrial machinery and equipment and transportation and communications equipment. Teaching may take place in public or private schools whose primary business is education or in a school associated with an organization whose primary business is other than education.

31317 - Instructors, Nonvocational Education - Teach or instruct out-of-school youths and adults in courses other than those that normally lead to an occupational objective and are less than the baccalaureate level. Subjects may include self-improvement and nonvocational courses such as Americanization, basic education, art, drama, music, bridge, homemaking, stock market analysis, languages, modeling, flying, dancing, and automobile driving. Teaching may take place in public or private schools or in an organization whose primary business is other than education.

31321 - Instructors and Coaches, Sports and Physical Training - Instruct or coach groups or individuals in the fundamentals of sports. Demonstrate techniques and methods of participation. Observe and inform participants of corrective measures necessary to improve their skills. Those required to hold teaching degrees should be reported in the appropriate teaching category.

31399 - All Other Teachers and Instructors - All other teachers and instructors not classified separately above.

Librarians, Archivists, Curators, and Other Education Related Occupations

31502 - Librarians, Professional - Administer libraries and perform related library services. Includes selecting, acquiring, cataloging, classifying, circulating, and maintaining library materials; furnishing reference, bibliographical, and reader's advisory services. May select music, films, or other audiovisual material for programs.

31505 - Technical Assistants, Library - Assist librarians by furnishing information on library sciences, facilities, and rules; by assisting readers in the use of card catalogs and indexes to locate books and other materials; and by answering questions that require only brief consultation of standard reference. May catalog books or train and supervise clerical staff.

31511 - Curators, Archivists, Museum Technicians, and Conservators - Curators: Administer affairs of museum and conduct scientific research programs. Direct instructional, research, and public service activities of institution. Archivists: Appraise, edit, and direct safekeeping of permanent records and historically valuable documents. Participate in research activities based on archival materials. Museum Technicians and Conservators: Prepare specimens such as fossils, skeletal parts, lace, and textiles for museum collection and exhibits. May restore documents or install, arrange, and exhibit materials.

31514 - Vocational and Educational Counselors - Counsel individuals and provide group educational and vocational guidance services.

31517 - Instructional Coordinators - Develop instructional material, coordinate educational content, and incorporate current technology in specialized fields that provide guidelines to educators and instructors for developing curricula and conducting courses. Include Educational Consultants and Specialists, Public Health Educators, and Instructional Material Directors.

31521 - Teacher Aides, Paraprofessional - Perform duties that are instructional in nature or deliver direct services to students and/or parents. Serve in a position for which a teacher or another professional has ultimate responsibility for the design and implementation of educational programs and services.

Health Practitioners, Technologists, Technicians, and Related Health Occupations

Health Diagnosing and Treating Practitioners

32102 - Physicians and Surgeons - Doctors of medicine who diagnose and treat mental or physical disorders. May specialize in one field such as surgery, obstetrics, or psychiatry.

32105 - Dentists - Diagnose and treat diseases, injuries, and malformations of teeth, gums, and related oral structures.

32108 - Optometrists - Diagnose, manage, and treat conditions and diseases of the human eye and visual system. Examine eyes to determine visual efficiency and performance by use of instruments and observation. Prescribe corrective procedures.

32114 - Veterinarians and Veterinary Inspectors - Diagnose and treat diseases and dysfunction of animals. May engage in a particular function such as research and development, consultation, administration, technical writing, sale or production of commercial products, or rendering of technical services to commercial firms or other organizations. Include Veterinary Inspectors.

32199 - All Other Health Diagnosing and Treating Practitioners - All other health diagnosing and treating practitioners not classified separately above.

Therapists

32302 - Respiratory Therapists - Provide assessment, diagnostic evaluation, treatment, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

32305 - Occupational Therapists - Plan, organize, and participate in medically oriented occupational programs in hospital or similar institution to rehabilitate patients who are physically or mentally ill.

32308 - Physical Therapists - Assess, plan, organize, and participate in rehabilitative programs that improve mobility, relieve pain, increase strength, and decrease or prevent deformity of patients suffering from disease or injury.

32314 - Speech-Language Pathologists and Audiologists - Examine and provide remedial services for persons with speech and hearing disorders. Perform research related to speech and language problems.

32317 - Recreational Therapists - Plan, organize, and direct medically approved recreation programs for patients in hospitals, nursing homes, or other institutions. Activities include sports, trips, dramatics, social activities, and arts and crafts.

32399 - All Other Therapists - All other therapists not classified separately above.

Health Care Maintenance and Treating Occupations

32502 - Registered Nurses - Administer nursing care to ill or injured persons. Licensing or registration required. Include administrative, public health, industrial, private duty, and surgical nurses.

32505 - Licensed Practical Nurses - Care for ill, injured, convalescent, and handicapped persons in hospitals, clinics, private homes, sanitariums, and similar institutions.

32508 - Emergency Medical Technicians - Administer first aid treatment and transport sick or injured persons to medical facility, working as a member of an emergency medical team.

32511 – Physician's Assistants - Provide patient services under direct supervision and responsibility of doctor of medicine or osteopathy. Elicit detailed patient histories and make complete physical examinations. Reach tentative diagnosis and order appropriate laboratory tests. Require substantial educational preparation, usually at junior or 4-year colleges. Most physician assistants complete 2 years of formal training, but training may vary from 1 to 5 years depending on the nature of the training and previous education and experience. May require certification. Exclude Ambulance Attendants, whose training is limited to the application of first aid, and Nurses.

32514 - Opticians, Dispensing and Measuring - Design, measure, fit, and adapt lenses and frames for client according to written optical prescription or specification. Assist client with selecting frames. Measure customer for size of eyeglasses and coordinate frames with facial and eye measurements and optical prescription. Prepare work order for optical laboratory containing instructions for grinding and mounting lenses in frames. Verify exactness of finished lens spectacles. Adjust frame and lens position to fit client. May shape or reshape frames. Include Contact Lens Opticians.

32517 - Pharmacists - Compound and dispense medications following prescriptions issued by physicians, dentists, or other authorized medical practitioners.

32519 - Pharmacy Technicians & Aides- Fill orders for unit doses and prepackaged pharmaceuticals and perform other related duties under the supervision and direction of a pharmacy supervisor or staff pharmacist. Duties include keeping records of drugs delivered to the pharmacy, storing incoming merchandise in proper locations, and informing the supervisor of stock needs and shortages. May clean equipment used in the performance of duties and assist in the care and maintenance of equipment and supplies. May operate cash register and accept prescriptions for filling.

32521 - Dietitians and Nutritionists - Organize, plan, and conduct food service or nutritional programs to assist in promotion of health and control of disease. May administer activities of department providing quantity food service. May plan, organize, and conduct programs in nutritional research.

32523 - Dietetic Technicians - Under direct supervision of Dietitians, or following established nutritional guidelines, advise on food or nutrition.

Other Health Professionals, Paraprofessionals, and Technicians

32902 - Medical and Clinical Laboratory Technologists - Perform a wide range of complex procedures in the general area of the clinical laboratory or perform specialized procedures in such areas as cytology, histology, and microbiology. Duties may include supervising and coordinating activities of workers engaged in laboratory testing. Include workers who teach medical technology when teaching is not their primary activity.

32905 - Medical and Clinical Laboratory Technicians - Perform routine tests in medical laboratory for use in treatment and diagnosis of disease. Prepare vaccines, biologicals, and serums for prevention of disease. Prepare tissue samples for Pathologists, take blood samples, and execute such laboratory tests as urinalysis and blood counts. May work under the general supervision of a Medical Laboratory Technologist.

32908 - Dental Hygienists - Perform dental prophylactic treatments and instruct groups and individuals in the care of the teeth and mouth.

32911 - Medical Records Technicians - Compile and maintain medical records of hospital and clinic patients.

32913 - Radiation Therapists - Provide radiation therapy to patients as prescribed by a radiologist according to established practices and standards. Duties may include reviewing prescription and diagnosis; acting as liaison with physician and supportive care personnel; preparing equipment, such as immobilization, treatment, and protection devices; and maintaining records, reports, and files. May assist in dosimetry procedures and tumor localization.

32914 - Nuclear Medicine Technologists - Prepare, administer, and measure radioactive isotopes in therapeutic, diagnostic, and tracer studies utilizing a variety of radioisotope equipment. Prepare stock solutions of radioactive materials and calculate doses to be administered by Radiologists. Subject patients to radiation. Execute blood volume, red cell survival, and fat absorption studies following standard laboratory techniques.

32919 - Radiologic Technologists - Take X-rays and CAT scans or administer nonradioactive materials into patient's bloodstream for diagnostic purposes. Include technologists who specialize in other modalities such as computed tomography, ultrasound, and magnetic resonance. Include workers whose primary duties are to demonstrate portions of the human body on X-ray film or fluoroscopic screen.

32925 - Cardiology Technologists - Conduct tests on pulmonary and/or cardiovascular systems of patients for diagnostic purposes. May conduct or assist in electrocardiograms, cardiac catheterizations, and pulmonary-function, lung capacity and similar tests.

32928 - Surgical Technologists and Technicians - Perform any combination of the following tasks either before, during, or after an operation: Prepare patient by washing, shaving, etc.; place equipment and supplies in operating room according to surgeon's instruction; arrange instruments under direction of nurse; maintain specified supply of fluids for use during operation; adjust lights and equipment as directed; hand instruments and supplies to surgeon, hold retractors, and cut sutures as directed; count sponges, needles, and instruments used during operation; and clean operating room.

32931 - Psychiatric Technicians - Provide nursing care to mentally ill, emotionally disturbed, or mentally retarded patients. Participate in rehabilitation and treatment programs. Help with personal hygiene. Administer oral medications and hypodermic injections, following physician's prescriptions and hospital procedures. Monitor patient's physical and emotional well-being and report to medical staff.

32951 - Veterinary Technicians and Technologists - Perform medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals. Prepare vaccines and serums for prevention of diseases. Prepare tissue samples, take blood samples, and execute laboratory tests such as urinalysis and blood counts. Clean and sterilize instruments and materials and maintain equipment and machines.

32999 - All Other Health Professionals, Paraprofessionals, and Technicians - All other health professionals, paraprofessionals, and technicians not classified separately above.

Writers, Artists, Entertainers, Athletes, and Related Occupations

34002 - Writers and Editors - Writers: Originate and prepare written material such as scripts, stories, news items, advertisements, and other material. Editors: Coordinate, edit, and analyze prepared written material. Include Managing Editors. Exclude Publicity Writers, Public Relations Specialists, Technical Writers, and Technical Editors.

34005 - Technical Writers and Editors - Write or edit technical materials, such as equipment manuals, appendices, and operating and maintenance instructions. May oversee preparation of illustrations, photographs, diagrams, and charts; and assist in layout work.

34008 - Public Relations Specialists and Publicity Writers - Engage in promoting or creating goodwill for individuals, groups, or organizations by writing or selecting favorable publicity material and releasing it through various communications media. Prepare and arrange displays, make speeches, and perform related publicity efforts.

34011 - Reporters and Correspondents - Collect and analyze facts about newsworthy events by interview, investigation, or observation. Report and write stories for newspaper, news magazine, radio, or television. Exclude correspondents who broadcast news for radio and television.

34014 - Broadcast News Analysts - Analyze, interpret, and broadcast news received from various sources.

34017 - Announcers, Radio and Television - Introduce various types of radio or television programs, interview or question guests, or act as master of ceremonies. Read news flashes and identify station by giving call letters.

34023 - Photographers - Photograph persons, subjects, merchandise, or other commercial products. May develop negatives and produce finished prints. Include Scientific Photographers, Aerial Photographers, and Photojournalists.

34026 - Camera Operators, Television and Motion Picture - Operate television or motion picture camera to photograph scenes for TV broadcasts, advertising, or motion pictures.

34028 - Broadcast Technicians - Set up, operate, and maintain the electronic equipment used to transmit radio and television programs. Control audio equipment to regulate volume level and quality of sound during radio and television broadcasts. Operate radio transmitter to broadcast radio and television programs. An FCC first class operator's license is usually required for this occupation. A few typical broadcast technician workers include: Audio Operators, Video Operators, Control Room Technicians, Transmitter Operators, Master-Control Engineers, Telecine Operators.

34035 - Artists and Related Workers - Design and execute artwork to illustrate subject matter; promote public consumption of materials, products, or services; or to influence others in their opinions of individuals or organizations. Include Graphic Designers, Commercial Artists, Artistic Painters, Art Directors, and Painting Restorers.

34038 - Designers, Except Interior Designers - Design or arrange objects and materials to achieve artistic or decorative effects for apparel or other commercial items. May also create, mark out, or draw designs for items such as furniture and machinery (product design). Designers are generally categorized according to articles or products designed, such as Clothes Designers, Industrial Designers, or according to type of design work, such as Embroidery Designers. Include Layout Artists.

34041 - Interior Designers - Plan, design, and furnish interiors of residential, commercial, or industrial buildings. Formulate design which is practical, aesthetic and conducive to intended purposes, such as raising productivity, selling merchandise, or improving life style. May specialize in a particular field, style, or phase of interior design. Exclude Merchandise Display Designers.

34044 - Merchandise Displayers and Window Trimmers - Plan and erect commercial displays, such as those in windows and interiors of retail stores and at trade exhibitions.

34047 - Music Directors, Singers, Composers, and Related Workers - Conduct, direct, plan, and lead instrumental or vocal performances by musical groups, such as orchestras, choirs, and glee clubs. Include workers who entertain by singing songs on stage, radio, television, or in motion pictures. Include Arrangers, Composers, and Orchestrators.

34051 - Musicians, Instrumental - Play one or more musical instruments in recital, in accompaniment, or as members of an orchestra, band, or other musical group.

34056 - Producers, Directors, Actors, and other Entertainers - Produce, direct, or play parts in stage, television, radio, or motion picture productions for entertainment, information, or instruction.

Other Professional, Paraprofessional, and Technical Occupations

39002 - Airplane Dispatchers and Air Traffic Controllers - Control air traffic on and within vicinity of airport and movement of air traffic between altitude sectors and control centers according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and insure flight safety.

39008 - Radio Operators - Receive and transmit communications using radiotelegraph or radiotelephone equipment in accordance with government regulations. May repair equipment.

39011 - Funeral Directors and Morticians - Perform various tasks to arrange and direct funeral services, such as coordinating transportation of body to mortuary for embalming, interviewing family or other authorized person to arrange details, selecting pallbearers, procuring official for religious rites, and providing transportation for mourners. Exclude top and middle managers whose duties are primarily policy making, planning, and administrative in nature and report them as General Managers or in another appropriate managerial occupation.

39999 - All Other Professional, Paraprofessional, and Technical Workers - All other professional, paraprofessional, and technical workers not classified separately above.

First-Line Supervisors and Manager/Supervisors

41002 - First-Line Supervisors and Managers/Supervisors - Sales and Related Workers - Directly supervise and coordinate activities of marketing, sales, and related workers. May perform management functions, such as budgeting, accounting, marketing, and personnel work, in addition to their supervisory duties.

Sales Occupations, Services

43002 - Sales Agents and Placers, Insurance - Sell life, endowments, fire, accident, and other types of insurance. May refer clients to independent brokers, work as independent broker, or be employed by an insurance company.

43005 - Brokers, Real Estate - Sell real estate, rent and manage properties, and arrange for loans while managing and operating real estate office.

43008 - Sales Agents, Real Estate - Rent, buy, and sell property to clients. Perform duties such as studying property listings, interviewing prospective clients, accompanying clients to property site, discussing conditions of sale, and drawing up real estate contracts.

43011 - Appraisers, Real Estate - Appraise real property to determine its value for purchase, sales, investment, mortgage, or loan purposes.

43014 - Sales Agents, Securities, Commodities, and Financial Services - Buy and sell securities in investment and trading firms, or call upon businesses and individuals to sell financial services. Provide financial services, such as loan, tax, and securities counseling. May advise securities customers about such things as stocks, bonds, and market conditions.

43017 - Sales Agents, Selected Business Services - Sell selected services, such as building maintenance, credit reporting, bookkeeping, security, printing, and storage space, to businesses. Exclude advertising, insurance, financial, and real estate sales agents.

43021 - Travel Agents - Plan trips for travel agency customers. Duties include determining destination, modes of transportation, travel dates, costs, accommodations required, and planning, describing, or selling itinerary package tours. May specialize in foreign or domestic service, individual or group travel, specific geographical area, airplane charters, or package tours.

43023 - Sales Agents, Advertising - Sell or solicit advertising. Sell things such as graphic art, advertising space in publications, custom-made signs, or TV and radio advertising time. May obtain leases for outdoor advertising sites or persuade retailer to use sales promotion display items.

43099 - All Other Sales Representatives and Salespersons, Services - All other services sales representatives and salespersons not classified separately above.

Merchandise, Products, and Other Sales and Sales-Related Occupations

49005 - Sales Representatives, Scientific and Related Products and Services, Except Retail - Sell goods or services requiring scientific or similar knowledge in such areas as biology, engineering, chemistry, and electronics, normally obtained from 2 or 3 years of postsecondary education or its equivalent. Sell products such as aircraft, agricultural equipment and supplies, industrial machinery, medical supplies, electronic equipment, chemicals, and precision instruments. Exclude Sales Engineers whose background or equivalent knowledge is equal to a baccalaureate degree in engineering.

49008 - Sales Representatives, Except Retail and Scientific and Related Products and Services - Sell goods or services for wholesalers or manufacturers to businesses or groups of individuals. Solicit orders from established clients or secure new customers. Work requires substantial knowledge of items sold.

49011 - Salespersons, Retail - Sell to the public any of a wide variety of merchandise, such as furniture, motor vehicles, appliances, or apparel. Include workers who sell less expensive merchandise where knowledge of the item sold is not a primary requirement. Exclude Cashiers.

49014 - Salespersons, Parts - Sell spare and replaceable parts and equipment from behind counter in agency, repair shop, or parts store. Determine make, year, and type of part needed by observing damaged part or listening to a description of malfunction. Read catalogue to find stock number, price, etc., and fill customer's order from stock. Exclude workers whose primary responsibilities are to receive, store, and issue materials, equipment, and other items from stockroom.

49017 - Counter and Rental Clerks - Receive orders for services, such as rentals, repairs, dry-cleaning, and storage. May compute cost and accept payment.

49021 - Stock Clerks, Sales Floor - Receive, store, and issue sales floor merchandise. Stock shelves, racks, cases, bins, and tables with merchandise and arrange merchandise displays to attract customers. May periodically take physical count of stock or check and mark merchandise.

49023 - Cashiers - Receive and disburse money in establishments other than financial institutions. Usually involves use of adding machines, cash registers, or change makers. May also include processing credit card transactions.

49026 - Telemarketers, Door-To-Door Sales Workers, News and Street Vendors, and Other Related Workers - Solicit orders for goods or services over the telephone; sell goods or services door-to-door or on the street.

49034 - Demonstrators and Promoters - Demonstrate merchandise and answer questions for the purpose of creating public interest in buying the product. May sell demonstrated merchandise.

49999 - All Other Sales and Related Workers - All other sales and related workers not classified separately above.

First-Line Supervisors and Manager/Supervisors

51002 - First-Line Supervisors and Managers/Supervisors - Clerical and Administrative Support Workers - Directly supervise and coordinate activities of clerical and administrative support workers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same clerical work as the workers they supervise.

Industry Specific Clerical and Administrative Support Occupations

Banking, Security, Finance, and Credit Occupations

53102 - Tellers - Receive and pay out money. Keep records of money and negotiable instruments involved in a financial institution's various transactions.

53105 - New Accounts Clerks - Interview persons desiring to open bank accounts. Explain banking services available to prospective customers and assist them in preparing application form.

53111 - Loan Interviewers - Interview loan applicants to elicit information; investigate applicants' background and verify references; prepare loan request papers; forward findings, reports, and documents to appraisal department.

53117 - Credit Checkers - Investigate history and credit standing of individuals or business establishments applying for credit. Telephone or write to credit departments of business and service establishments to obtain information about applicant's credit standing.

53121 - Loan and Credit Clerks - Assemble documents, prepare papers, process applications, and complete transactions of individuals applying for loans and credit. Loan Clerks: Review loan papers to insure completeness; operate typewriters, word processors, or personal computers to prepare correspondence, reports, and loan documents from draft; and complete transactions between loan establishment, borrowers, and sellers upon approval of loan. Credit Clerks: Interview applicants to obtain personal and financial data; determine credit worthiness; process applications; and notify customer of acceptance or rejection of credit. Exclude Loan Interviewers.

53123 - Adjustment Clerks - Investigate and resolve customers' inquiries concerning merchandise, service, billing, or credit rating. Examine pertinent information to determine accuracy of customers' complaints and responsibility for errors. Notify customers and appropriate personnel of findings, adjustments, and recommendations, such as exchange of merchandise, refund of money, credit to customers' accounts, or adjustment to customers' bills.

53126 - Statement Clerks - Prepare and distribute bank statements to customers, answer inquiries, and reconcile discrepancies in records and accounts.

53128 - Brokerage Clerks - Perform clerical duties involving the purchase or sale of securities. Duties include writing orders for stock purchases and sales, computing transfer taxes, verifying stock transactions, accepting and delivering securities, informing customers of stock price fluctuations, computing equity, distributing dividends, and keeping records of daily transactions and holdings.

Insurance Occupations

53302 - Insurance Adjusters, Examiners, and Investigators - Investigate, analyze, and determine the extent of insurance company's liability concerning personal, casualty, or property loss or damages, and attempt to effect settlement with claimants. Correspond with or interview medical specialists, agents, witnesses, or claimants to compile information. Calculate benefit payments and approve payment of claims within a certain monetary limit. Exclude Insurance Sales Agents, Insurance Policy Process Clerks, and Claims Clerks.

53311 - Insurance Claims Clerks - Obtain information from insured or designated persons for purpose of settling claim with insurance carrier.

53314 - Insurance Policy Processing Clerks - Process applications for, changes to, reinstatement of, and cancellation of insurance policies. Duties include reviewing insurance applications to insure that all questions have been answered, compiling data on insurance policy changes, changing policy records to conform to insured party's specifications, compiling data on lapsed insurance policies to determine automatic reinstatement according to company policies, canceling insurance policies as requested by agents, and verifying the accuracy of insurance company records. Exclude Insurance Claims Clerks and Banking Insurance Clerks.

Investigative and Related Occupations, Except Insurance

53508 - Bill and Account Collectors - Locate and notify customers of delinquent accounts by mail, telephone, or personal visit to solicit payment. Duties include receiving payment and posting amount to customers' account; preparing statements to credit department if customer fails to respond; initiating repossession proceedings or service disconnection; keeping records of collection and status of accounts. Exclude workers who collect money from coin boxes.

Municipal and Related Occupations

53702 - Court Clerks - Perform clerical duties in court of law; prepare docket of cases to be called; secure information for judges; and contact witnesses, attorneys, and litigants to obtain information for court.

53705 - Municipal Clerks - Draft agendas and bylaws for town or city council; record minutes of council meetings; answer official correspondence; keep fiscal records and accounts; and prepare reports on civic needs.

Lodging and Travel Occupations

53802 - Travel Clerks - Provide tourists with travel information, such as points of interest, restaurants, rates, and emergency service. Duties include answering inquiries, offering suggestions, and providing literature pertaining to trips, excursions, sporting events, concerts and plays. May make reservations, deliver tickets, arrange for visas, or contact individuals and groups to inform them of package tours. Exclude Travel Agents.

53805 - Reservation and Transportation Ticket Agents - Make and confirm reservations for passengers and sell tickets for transportation agencies such as airlines, bus companies, railroads, and steamship lines. May check baggage and direct passengers to designated concourse, pier, or track. Exclude workers selling tickets for subways, city buses, ferryboats, and street railways.

53808 - Hotel Desk Clerks - Accommodate hotel patrons by registering and assigning rooms to guests, issuing room keys, transmitting and receiving messages, keeping records of occupied rooms and guests' accounts, making and confirming reservations, and presenting statements to and collecting payments from departing guests.

Other Industry Specific Occupations

53902 - Library Assistants and Bookmobile Drivers - Library Assistants: Compile records; sort and shelve books; issue and receive library materials, such as books, pictures, cards, slides, audio and video recordings, and microfilm. Locate library materials for loan and replace materials in shelving area (stacks) or files according to identification number and title. Register patrons to permit them to borrow books, periodicals, and other library materials. Bookmobile Drivers: Operate a bookmobile or light truck that pulls a book trailer to specific locations on a predetermined schedule and assist with providing services in mobile library.

53905 - Teacher Aides and Educational Assistants, Clerical - Arrange work materials, supervise students at play, and operate audiovisual equipment under guidance of a teacher.

53908 - Advertising Clerks - Receive orders for classified advertising in a newspaper or magazine from customers in person or by telephone. Examine and mark classified advertisements according to copy sheet specifications to guide composing room in assembling type. Verify conformance of published advertisements to specifications for billing purposes.

53914 - Real Estate Clerks - Perform duties concerned with rental, sale, and management of real estate, such as typing copies of listings, computing interest or penalty owed, holding collateral in escrow, and checking due notices on taxes and renewal dates of insurance and mortgage loans.

Secretarial and General Office Occupations

Secretaries

55102 - Legal Secretaries - Prepare legal papers and correspondence, such as summonses, complaints, motions, and subpoenas. May review law journals and other legal publications to identify court decisions pertinent to pending cases and submit articles to company officials. Must be familiar with legal terminology, procedures, and documents, as well as legal research.

55105 - Medical Secretaries - Perform secretarial duties utilizing specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties include taking dictation; and compiling and recording medical charts, reports, and correspondence using a typewriter, word processor, or personal computer. Duties may also include preparing and sending bills to patients or recording appointments.

55108 - Secretaries, Except Legal and Medical - Relieve officials of clerical work and minor administrative and business details by scheduling appointments, giving information to callers, taking dictation, composing and typing routine correspondence (using typewriter or word processor), reading and routing incoming mail, filing correspondence and other records, and other assigned clerical duties.

Other Secretarial Related and General Office Occupations

55302 - Stenographers and/or Court Reporters - Use shorthand or speedwriting notes to take dictation, record correspondence, reports, court testimony, examinations, instructions, or other material and transcribes the recorded material.

55305 - Receptionists and Information Clerks - Answer inquiries and obtain information for general public (e.g., customers, visitors, and other interested parties). Provide information regarding activities conducted at establishment; location of departments, offices, and employees within organization; or services in a hotel. May perform other clerical duties as assigned. Exclude Receptionists who operate switchboards.

55307 - Typists, Including Word Processing - Use typewriter or word processing equipment to type letters, reports, forms, or other straight copy material from rough draft, corrected copy, or voice recording. May perform other clerical duties as assigned. Exclude Keypunchers, Secretaries, and Stenographers.

55314 - Personnel Clerks, Except Payroll and Timekeeping - Compile and keep personnel records. Record data for each employee, such as address, weekly earnings, absences, amount of sales or production, supervisory reports on ability, and date of and reason for termination. Compile and type reports from employment records. File employment records. Search employee files and furnish information to authorized persons.

55321 - File Clerks - File correspondence, cards, invoices, receipts, and other records in alphabetical or numerical order or according to the filing system used. Locate and remove material from file when requested. May be required to classify and file new material.

55323 - Order Clerks, Materials, Merchandise, and Service - Receive and process incoming orders for materials, merchandise, or services such as repairs, installations, or rental of facilities. Duties include informing customers of order receipt, prices, shipping dates, and delays; preparing contracts; and handling complaints. Exclude workers who dispatch as well as take orders for services.

55326 - Procurement Clerks - Compile information and records to draw up purchase orders for procurement of materials.

55328 - Statistical Clerks - Compile and compute data according to statistical formulas for use in statistical studies. May perform actuarial computations using algebra and trigonometry and compile charts and graphs for use by Actuaries. Include Actuarial Clerks.

55332 - Interviewing Clerks, Except Personnel and Social Welfare - Interview public to obtain information. Contact persons by telephone, mail, or in person for the purpose of completing forms, applications, or questionnaires. Ask specific questions, record answers, and assist persons with completing form. May sort, classify, and file forms. Exclude workers whose primary duty is processing applications.

55335 - Customer Service Representatives, Utilities - Interview applicants for water, gas, electric, or telephone service. Talk with customer by phone or in person and receive orders for installation, turn-on, discontinuance, or change in services.

55338 - Bookkeeping, Accounting, and Auditing Clerks - Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. May also check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

55341 - Payroll and Timekeeping Clerks - Compile and post employee time and payroll data. May compute time worked by employees, worker's production, commission, etc.; computes and posts wages and deductions; may prepare paychecks.

55344 - Billing, Cost, and Rate Clerks - Compile data, compute fees and charges, and prepare invoices for billing purposes. Duties include computing costs and calculating rates for goods, services, and shipment of goods; posting data; and keeping other relevant records. May involve use of typewriters, calculators, adding and bookkeeping machines, word processors, or personal computers. Exclude workers whose primary duty is operation of special office machines or workers who calculate charges for passenger transportation.

55347 - General Office Clerks - Perform duties too varied and diverse to be classified in any specific office clerical occupation. Clerical duties may be assigned in accordance with the office procedures of individual establishments and may include a combination of bookkeeping, typing, stenography, office machine operation, and filing.

Electronic Data Processing and Other Office Machine Occupations

56002 - Billing, Posting, and Calculating Machine Operators - Operate machines that automatically perform mathematical processes, such as addition, subtraction, multiplication, and division, to calculate and record billing, accounting, statistical, and other numerical data. Duties include operating special billing machines to prepare statements, bills, and invoices, and operating bookkeeping machines to copy and post data, make computations, and compile records of transactions.

56005 - Duplicating Machine Operators - Operate one of a variety of office machines such as photocopying, photographic, mimeograph, and duplicating machines to make copies. Exclude blueprinting machine operators and operators of offset printing machines and presses.

56008 - Mail Machine Operators, Preparation and Handling - Operate machines that: Emboss names, addresses, and other matter onto metal plates for use in addressing machines; print names, addresses, and similar information onto items such as envelopes, accounting forms, and advertising literature; address, fold, stuff, seal, and stamp mail; and open envelopes. Exclude workers who prepare incoming and outgoing mail for distribution by hand.

56011 - Computer Operators, Except Peripheral Equipment - Monitor and control electronic computer to process business, scientific, engineering, and other data according to operating instructions. Exclude operators who control peripheral equipment only.

56014 - Peripheral EDP Equipment Operators - Operate computer peripheral equipment, such as tape or disk drives, printers, card-to-tape or tabulating machines, sorters, or interpreters. Exclude Computer Operators and Data Entry Keyers.

56017 - Data Entry Keyers, Except Composing - Operate keyboard or other data entry devices to prepare data processing input on cards, disk, or tape. Duties include coding and verifying alphabetic or numeric data.

56099 - All Other Office Machine Operators - All other office machine operators not classified separately above.

Communications, Mail, and Message Distributing Occupations

Communications Equipment Operators

57102 - Switchboard Operators - Operate cord or cordless switchboard to relay incoming, outgoing, and interoffice calls. May supply information to callers and record messages. May also act as receptionist, perform routine clerical work, and type.

Mail and Message Distribution Occupations

57302 - Mail Clerks, Except Mail Machine Operators and Postal Service - Prepare incoming and outgoing mail for distribution. Duties include time stamping, opening, reading, sorting, and routing incoming mail; sealing, stamping, and affixing postage to outgoing mail or packages; and keeping necessary records and completed forms. Exclude workers whose primary duty is mail distribution or operation of mail-preparing and mail-handling machines.

57305 - Postal Mail Carriers - Sort mail for delivery. Deliver mail on established route by vehicle or on foot.

57311 - Messengers - Run errands. Sort and deliver messages, documents, packages, and other items to offices or departments within an establishment or to other business concerns, traveling by foot, bicycle, motorcycle, automobile, or public conveyance. May use telephone to complete assigned tasks.

Material Recording, Scheduling, Dispatching, and Distributing Occupations

58002 - Dispatchers, Police, Fire, and Ambulance - Receive complaints from public concerning crimes and police emergencies. Broadcast orders to police radio patrol units in vicinity of complaint to investigate. Operate radio and telephone equipment to receive reports of fires and medical emergencies and relay information or orders to proper officials.

58005 - Dispatchers, Except Police, Fire, and Ambulance - Schedule and dispatch workers, work crews, equipment, or service vehicles for conveyance of materials, freight, or passengers or for normal installation, service, or emergency repairs rendered outside the place of business. Duties may include use of radio or telephone to transmit assignments and compiling statistics and reports on work progress.

58008 - Production, Planning, and Expediting Clerks - Coordinate and expedite the flow of work and materials within or between departments of an establishment according to production schedule. Duties, which are primarily clerical in nature, include reviewing and distributing production schedules and work orders; conferring with department supervisors to determine progress of work and completion dates; and compiling reports on progress of work and production problems. Work may also include scheduling workers and estimating costs; routing and delivering parts to insure production quotas are met; scheduling shipment of parts; keeping inventory of material in departments; insuring vendors ship merchandise on promised date; and writing special orders for services and merchandise. Exclude workers whose primary duties are weighing, measuring, and checking merchandise, supplies, and equipment. Exclude workers who engage in material expediting of a nonclerical nature.

58011 - Transportation Agents - Expedite movement of freight, mail, baggage, and passengers through airline terminals. Route inbound and outbound air freight shipments. May prepare airway bill of lading on freight and record baggage, mail, freight, weights, and number of passengers on airplane.

58014 - Meter Readers, Utilities - Read electric, gas, water, or steam consumption meters and record volume used by residential and commercial customers.

58017 - Weighers, Measurers, Checkers, and Samplers, Recordkeeping - Weigh, measure, and check materials, supplies, and equipment for the purpose of keeping relevant records. Duties are primarily clerical by nature. Include workers who collect and keep record of samples of products or materials. Exclude Production Samplers and Weighers.

58023 - Stock Clerks - Stockroom, Warehouse or Storage Yard - Receive, store, and issue materials, equipment, and other items from stockroom, warehouse, or storage yard. Keep records and compile stock reports. Exclude stockroom laborers and workers whose primary duties involve shipping, weighing, and checking.

58026 - Order Fillers, Wholesale and Retail Sales - Fill customers' mail and telephone orders from stored merchandise in accordance with specifications on sales slips or order forms. Duties may include computing prices of items, completing order receipts, keeping records of outgoing orders, and requisitioning additional materials, supplies, and equipment. Exclude Laborers, Stock Clerks, and workers whose primary duties involve weighing and checking.

58028 - Shipping, Receiving, and Traffic Clerks - Verify and keep records on incoming and outgoing shipments. Prepare items for shipment. Duties include assembling, addressing, stamping, and shipping merchandise or material; receiving, unpacking, verifying, and recording incoming merchandise or material; and arranging for the transportation of products. Exclude Laborers, Stock Clerks, and workers whose primary duties involve weighing and checking.

58099 - All Other Material Recording, Scheduling, and Distributing Workers - All other material recording, scheduling, and distributing workers not classified separately above.

Other Clerical and Administrative Support Occupations

59999 - All Other Clerical and Administrative Support Workers - All other clerical and administrative support workers not classified separately above.

First-Line Supervisors and Managers/Supervisors - Service Occupations

61002 – Fire fighting and Prevention Supervisors - Supervise and coordinate activities of workers engaged in fire fighting and fire prevention and control.

61005 - Police and Detective Supervisors - Supervise and coordinate activities of members of police force.

61008 - Housekeeping Supervisors - Supervise work activities of cleaning personnel to insure clean, orderly, and attractive rooms in hotels, hospitals, educational institutions, and similar establishments. Assign duties, inspect work, and investigate complaints regarding housekeeping service and equipment and take corrective action. May purchase housekeeping supplies and equipment, take periodic inventories, screen applicants, train new employees, and recommend dismissals.

61099 - All Other Supervisors and Managers/Supervisors - Service Workers - All other supervisors and managers/supervisors of service workers not classified separately above.

Protective Service Occupations

63008 - Firefighters - Control and extinguish fires, protect life and property, and maintain equipment as paid volunteer or employee of city, township, state, or federal government.

63011 - Police Detectives - Conduct investigations to prevent or solve crimes.

63014 - Police Patrol Officers - Maintain order, enforce laws and ordinances, and protect life and property in an assigned patrol district. Perform combination of following duties: Patrol a specific area on foot or in a vehicle; direct traffic; issue traffic summonses; investigate accidents; apprehend, arrest, and process prisoners; and give evidence in court.

63021 - Parking Enforcement Officers - Patrol assigned area such as public parking lot or section of city to issue tickets to overtime parking violators and illegally parked vehicles.

63023 - Bailiffs - Open court by announcing entrance of judge. Seat witnesses and jurors in specified areas of courtroom. Eject or arrest individuals disturbing proceedings.

63028 - Criminal Investigators, Public Service - Plan and conduct investigations related to suspected violations of federal, state, or local laws.

63032 - Sheriffs and Deputy Sheriffs - Enforce law and order in rural or unincorporated districts or serve legal processes of courts. May patrol courthouse, guard court or grand jury, or escort defendants. Exclude Deputy Sheriffs who spend the majority of their time guarding prisoners in county correctional institutions.

63035 - Detectives and Investigators, Except Public - Protect property, merchandise, and money of store or similar establishment by detecting theft, shoplifting, or other unlawful practices by public or employees. Perform necessary action to preserve order and enforce standards of decorum established by management. Include Investigators who conduct private investigations, such as obtaining confidential information, seeking missing persons, or investigating crimes and thefts.

63044 - Crossing Guards - Guide or control vehicular or pedestrian traffic at such places as street and railroad crossings and construction sites.

63047 - Guards and Watch Guards - Stand guard at entrance or patrol premises to prevent theft, violence, or infractions of rules.

63099 - All Other Protective Service Workers - All other protective service workers not classified separately above.

Food and Beverage Preparation and Service Occupations

65002 - Hosts and Hostesses, Restaurant, Lounge, or Coffee Shop - Welcome patrons, seat them at tables or in lounge, and insure quality of facilities and service.

65005 - Bartenders - Mix and serve to patrons, directly or through wait staff, alcoholic and nonalcoholic drinks following standard recipes.

65008 - Waiters and Waitresses - Serve food and/or beverages to patrons at tables. Usually take order from patron and make out check. May set table with linen and silverware and take payment from patron. May serve customers at counter as well as table. Exclude workers who only work at counters.

65011 - Food Servers, Outside - Serve food to patrons outside of a restaurant environment, such as in hotels, hospital rooms, or cars. Exclude Food Vendors.

65014 - Dining Room and Cafeteria Attendants and Bartender Helpers - Perform any combination of the following duties to facilitate food service: Carry dirty dishes from dining room to kitchen; replace soiled table linens; set tables with silverware and glassware; replenish supply of clean linens, silverware, glassware, and dishes; supply service bar with food, such as soups, salads, and desserts; and serve ice water, butter, and coffee to patrons. May wash tables.

65017 - Counter Attendants - Lunchroom, Coffee Shop, or Cafeteria - Serve food to diners at counter or from a steam table. Exclude Counter Attendants who also wait tables.

65021 - Bakers, Bread and Pastry - Mix and bake ingredients according to recipes to produce small quantities of breads, pastries, and other baked goods for consumption on premises or for sale as specialty baked goods.

65023 - Butchers and Meat Cutters - Cut, trim, and prepare carcasses and consumer-sized portions of meat for sale or for use in food service establishments. Exclude butchers working in slaughtering, meatpacking, or prepared-meat establishments.

65026 - Cooks, Restaurant - Prepare, season, and cook soups, meats, vegetables, desserts, and other foodstuffs in restaurants. May order supplies, keep records and accounts, price items on menu, or plan menu.

65028 - Cooks, Institution or Cafeteria - Prepare and cook family style meals for institutions such as schools, hospitals, or cafeterias. Usually prepare meals in large quantities rather than to individual order. May cook for employees in office building or other large facility.

65032 - Cooks, Fast Food - Prepare and cook food in a fast-food restaurant with a limited menu. Duties of the cooks are limited to preparation of a few basic items and normally involve operating large-volume, single-purpose cooking equipment.

65035 - Cooks, Short Order - Prepare and cook to order a variety of foods that require only a short preparation time. May take orders from customers and serve patrons at counters or tables. Exclude Cooks, Fast Food.

65038 - Food Preparation Workers - Perform a variety of food preparation duties, such as preparing cold foods and maintaining and cleaning kitchen work areas, equipment, and utensils. Perform simple tasks such as preparing shellfish or slicing meat. May brew coffee and tea or prepare sandwiches.

65041 - Combined Food Preparation and Service Workers - Perform duties which combine both food preparation and food service. Workers who spend more than 80 percent of their time in one job should be reported in that occupation.

65099 - All Other Food Service Workers - All other food service workers not classified separately above.

Health Service and Related Occupations

66002 - Dental Assistants - Assist dentist at chair, set up patient and equipment, keep records, and perform related duties as required.

66005 - Medical Assistants - Perform various duties under the direction of physician in examination and treatment of patients. Prepare treatment room, inventory supplies and instruments, and set up patient for attention of physician. Hand instruments and materials to physician as directed. Schedule appointments, keep medical records, and perform secretarial duties.

66008 - Nursing Aides, Orderlies, and Attendants - Work under the direction of nursing or medical staff to provide auxiliary services in the care of patients. Perform duties such as answering patient's call bell, serving and collecting food trays, and feeding patients. Orderlies are primarily concerned with setting up equipment and relieving nurses of heavier work. Exclude Psychiatric Aides and Home Health Aides.

66011 - Home Health Aides - Care for elderly, convalescent, or handicapped person in home of patient. Perform duties for patient such as changing bed linen; preparing meals; assisting in and out of bed; bathing, dressing, and grooming; and administering oral medications under doctors' orders or direction of nurse. Exclude Nursing Aides and Homemakers.

66017 - Physical and Corrective Therapy Assistants and Aides - Prepare patient and/or administer physical therapy treatment, such as massages, traction, and heat, light and sound treatment. Instruct, motivate, and assist patients with learning and improving functional activities. Normally work under the direction of a Physical or Corrective Therapist.

66021 - Occupational Therapy Assistants and Aides - Assist Occupational Therapists in administering medically-oriented occupational programs to assist in rehabilitating patients in hospitals and similar institutions.

66099 - All Other Health Service Workers - All other health service workers not classified separately above.

Cleaning and Building Service Occupations

67002 - Maids and Housekeeping Cleaners - Perform any combination of tasks to maintain private households or commercial establishments, such as hotels, restaurants and hospitals, in a clean and orderly manner. Duties include making beds, replenishing linens, cleaning rooms and halls, and arranging furniture.

67005 - Janitors and Cleaners, Except Maids and Housekeeping Cleaners - Keep buildings in clean and orderly condition. Perform heavy cleaning duties, such as operating motor-driven cleaning equipment, mopping floors, washing walls and glass, and removing rubbish. Duties may include tending furnace and boiler, performing routine maintenance activities, notifying management of need for repairs and additions, and cleaning snow or debris from sidewalk.

67008 - Pest Controllers and Assistants - Spray or release chemical solutions or toxic gases and set mechanical traps to kill pests and vermin such as mice, termites, and roaches, that infest buildings and surrounding areas.

67099 - All Other Cleaning and Building Service Workers - All other cleaning and building service workers not classified separately above.

Personal Service Occupations

68005 - Hairdressers, Hairstylists, and Cosmetologists - Provide beauty services, such as suggesting hairstyles, cutting and treating hair and scalp, applying makeup, dressing wigs, and electrolysis, to customers. Exclude Shampooers, Manicurists, and Beauty School Instructors.

68014 - Amusement and Recreation Attendants - Perform any of a variety of attending duties at amusement or recreation facility. Schedule use of recreation facilities, allocate equipment to participants of sporting events or recreational pursuits, collect fees for games played, or operate carnival rides and amusement concessions.

68017 - Guides - Escort individuals or groups on cruises, sightseeing tours, or through places of interest such as industrial establishments, public buildings, and art galleries.

68021 - Ushers, Lobby Attendants, and Ticket Takers - Assist patrons at entertainment events, such as sporting events, motion pictures, or theater performances. Collect admission tickets and passes from patrons. May assist in finding seats, searching for lost articles, and locating such facilities as rest rooms and telephones.

68023 - Baggage Porters and Bellhops - Carry baggage for travelers at transportation terminals or for guests at hotels or similar establishments. Additional duties include assisting handicapped persons, running errands, delivering ice, and directing people to their desired destinations.

68035 - Personal and Home Care Aides - Perform a variety of tasks at places of residence. Duties include keeping house and advising families having problems with such things as nutrition, cleanliness, and household utilities. Exclude Nursing Aides and Home Health Aides.

68038 - Child Care Workers - Attend to children at child care centers, schools, businesses, and institutions. Perform variety of tasks such as dressing, feeding, bathing, and overseeing play. Exclude Preschool Teachers and Teacher Aides.

68041 - Funeral Attendants - Perform variety of tasks during funeral such as placing casket in parlor or chapel prior to service; arranging floral offerings or lights around casket; directing or escorting mourners; closing casket; and issuing and storing funeral equipment.

69999 - All Other Service Workers - All other service workers not classified separately above.

First-Line Supervisors

72002 - First-Line Supervisors and Managers/Supervisors - Agricultural, Forestry, Fishing, and Related Workers - Directly supervise and coordinate the activities of agricultural, forestry, fishing, and related workers. May supervise helpers assigned to these workers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same work as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of the employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

Timber Cutting and Logging Occupations

73002 - Fallers and Buckers - Fell trees and saw into specified log lengths, working alone or as a member of a team.

73005 - Choke Setters - Fasten chokers around logs, preparing to yard them from felling and bucking area to storage or loading landing.

73008 - Log-Handling Equipment Operators - Operate log handling equipment to unload log trucks and gondolas or deck logs by species, size, and sort.

73011 - Logging Tractor Operators - Drive tractor equipped with one or more accessories, such as bulldozer blade, frontal hydraulic shear, grapple, logging arch, cable winches, hoisting rack, or crane boom, to fell tree, to skid, load and unload, or stack logs, or to pull stumps or clear brush.

73099 - All Other Timber Cutting and Related Logging Workers - All other timber cutting and related logging workers not classified separately above.

Other Agricultural, Forestry, Fishing, and Related Occupations

79002 - Forest and Conservation Workers - Develop, maintain, and protect forest, forested areas, and woodlands through such activities as raising and transporting tree seedlings; combating insects, pests, and diseases harmful to trees; and controlling erosion and leaching of forest soil. Include Forester Aides, Seedling Pullers, and Tree Planters.

79008 - Log Graders and Scalers - Grade logs or estimate the marketable content or value of logs or pulpwood in sorting yards, millpond, log deck, or similar locations. Inspect logs for defects or measure logs to determine volume. Exclude Log Inspectors who are primarily buyers.

79017 - Animal Caretakers, Except Farm - Feed, water, groom, exercise, or otherwise care for small or large animals, fish, or birds in zoos, circuses, pounds, laboratories, animal hospitals, aquariums, kennels, or stables. Clean and repair cages, pens, or fish tanks. May administer tests to animals or give treatments to sick or injured animals. May keep records of feedings, tests, and treatments; and of animals received and discharged.

79036 - Sprayers/Applicators - Spray herbicides, pesticides, and fungicides on trees, shrubs, and lawns using hoses and truck-mounted tank. Fill sprayer tank with water and chemicals according to prescribed formula. May use portable spray equipment. Exclude workers who also perform duties of Lawn Maintenance Workers or Pruners.

79041 - Laborers, Landscaping and Groundskeeping - Landscape and/or maintain grounds of property using hand or power tools or equipment. May work in nursery facility or at customer location. Workers typically perform a variety of tasks, which may include any combination of the following: sod laying, mowing, trimming, planting, watering, fertilizing, digging, raking, and sprinkler installation. Workers may help Brick and Stonemasons.

79806 - Veterinary Assistants - Examine animals for veterinarian, prepare animals for surgery, perform post-operational medical treatment as needed, and give medications to animals. Usually works directly under veterinarian. Receive extensive training on the job and may also have some postsecondary education such as trade school or junior college.

79999 - All Other Agricultural, Forestry, Fishing, and Related Workers - All other agricultural, forestry, fishing, and related workers not classified separately above.

First-Line Supervisors and Managers/Supervisors - Production, Construction, Maintenance, and Related Occupations

81002 - First-Line Supervisors and Managers/Supervisors - Mechanics, Installers, and Repairers - Directly supervise and coordinate activities of mechanics, repairers, and installers and their helpers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same repair work as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

81005 - First-Line Supervisors and Managers/Supervisors - Construction Trades and Extractive Workers - Directly supervise and coordinate activities of construction or extractive workers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same construction work as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

81008 - First-Line Supervisors and Managers/Supervisors - Production and Operating Workers - Directly supervise and coordinate activities of production and operating workers, such as testers, precision workers, machine setters and operators, assemblers, fabricators, or plant and system operators. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same production work as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

81011 - First-Line Supervisors and Managers/Supervisors - Transportation and Material-Moving Machine and Vehicle Operators - Directly supervise and coordinate activities of transportation and material-moving machine and vehicle operators. May supervise helpers assigned to these workers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same work as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

81017 - First-Line Supervisors and Managers/Supervisors - Helpers, Laborers, and Material Movers, Hand - Directly supervise and coordinate activities of helpers, laborers, and material movers. Managers/Supervisors are generally found in smaller establishments where they perform both supervisory and management functions, such as accounting, marketing, and personnel work, and may also engage in the same hand labor as the workers they supervise. Exclude work leaders who spend 20 percent or more of their time at tasks similar to those of employees under their supervision and report them in the occupations which are most closely related to their specific work duties.

81099 - All Other First-Line Supervisors and Managers/Supervisors - Production, Construction, Maintenance, and Related Workers - All other first-line supervisors in this category not classified separately above.

Inspectors and Related Occupations

83002 - Precision Inspectors, Testers, and Graders - Perform precision inspecting, testing, and grading of parts, products, and equipment for defects, wear, and deviations from specifications. The majority of these workers use precision measuring instruments and complex test equipment and hand tools. May make minor repairs. Exclude workers who combine inspection and testing with major repair work.

83005 - Production Inspectors, Testers, Graders, Sorters, Samplers, and Weighers - Inspect, test, grade, sort, sample, or weigh nonagricultural raw materials or processed, machined, fabricated, or assembled parts or products. Work may be performed before, during, or after processing.

Mechanics, Installers, and Repairers

Machinery and Related Mechanics, Installers, and Repairers

85110 - Machinery Maintenance Mechanics - Repair and maintain the operating condition of industrial production and processing machinery, printing machinery, and refinery and pipeline distribution systems. Duties include repairing machinery and mechanical equipment, such as pumps, conveyor systems, and motors, in accordance with diagrams, operating manuals, or manufacturer's specifications. Exclude Millwrights and Mobile Heavy Equipment Mechanics, such as crane, bulldozer, grader, or conveyor mechanics.

85118 - Machinery Maintenance Mechanics, Water or Power Generation Plant - Install, adjust, repair, and maintain machinery in power generating stations and water treatment plants. Duties include the repair and maintenance of: Mechanical elements of generators, waterwheels, piping, and water-inlet controls in generating stations; steam boilers, condensers, pumps, compressors, and similar equipment in gas manufacturing plants; and equipment used to process and distribute water for human consumption and industrial use.

85119 - All Other Machinery Maintenance Mechanics - All other machinery maintenance mechanics not classified separately above.

85123 - Millwrights - Install new machinery and heavy equipment according to layout plans, blueprints, and other drawings. Dismantle and move machinery and heavy equipment when changes in plant layout are required. Use a variety of hand tools, hoists, dollies, and trucks. May construct foundations for machines.

85128 - Machinery Maintenance Workers - Change parts, lubricate machinery, and perform other routine machinery maintenance. Exclude workers who repair machinery.

85132 - Maintenance Repairers, General Utility - Perform work involving two or more maintenance skills to keep machines, mechanical equipment, or structure of an establishment in repair. Duties may involve pipefitting, boilermaking, insulating, welding, machining, machine and equipment repairing, carpentry, and electrical work. May also include planning and laying out of work relating to repairs; repairing electrical and/or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs. This occupation is generally found in small establishments where specialization in maintenance work is impractical.

Mobile Equipment Mechanics, Installers, and Repairers

85302 - Automotive Mechanics - Adjust, repair, and overhaul automotive vehicles. May be designated according to specialties, such as Brake Repairers, Transmission Mechanics, or Front-end Mechanics. Exclude Auto Body Repairers, Bus and Truck Mechanics, Diesel Engine Specialists, and Electrical Systems Specialists.

85305 - Automotive Body and Related Repairers - Repair, repaint, and refinish automotive vehicle bodies; straighten vehicle frames; and replace damaged vehicle glass.

85308 - Motorcycle Repairers - Repair and overhaul motorcycles, motor scooters, mopeds, or similar motorized vehicles.

85311 - Bus and Truck Mechanics and Diesel Engine Specialists - Repair and maintain the operating condition of trucks, buses, and all types of diesel engines. Include mechanics working primarily with automobile diesel engines.

85314 - Mobile Heavy Equipment Mechanics, Except Engines - Repair and maintain mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining. Exclude Rail Car Repairers and Diesel Engine Specialists.

85321 - Farm Equipment Mechanics - Maintain, repair, and overhaul farm machinery and vehicles, such as tractors, harvesters, and irrigation systems. Include repairers of dairy equipment. Exclude Engine Specialists.

85323 - Aircraft Mechanics - Repair and maintain the operating condition of aircraft assemblies, such as hydraulic and pneumatic systems, landing gear, propeller assemblies, fuel tanks, and airframe assemblies. Inspect, test, modify, and install equipment according to specifications, using tools such as power shears, acetylene welding equipment, rivet guns, and air or electric drills. Include Helicopter Repairers. Exclude Aircraft Engine Specialists and Aircraft Electricians.

85328 - Small Engine Specialists - Repair and maintain the operating condition of nonautomobile gasoline-powered, internal combustion engines and the equipment powered by those engines. Include repairers of outboard motors, snowmobiles, lawn mowers, and chain saws. Exclude Motorcycle Repairers.

Communications Equipment Mechanics, Installers, and Repairers

85502 - Central Office and PBX Installers and Repairers - Test, analyze, and repair telephone or telegraph circuits and equipment at a central office location using test meters and hand tools. Analyze and repair defects in communications equipment on customers' premises using circuit diagrams, polarity probes, meters, and a telephone test set. May install equipment.

85514 - Radio Mechanics - Test and repair stationary, mobile, and portable radio transmitting and receiving equipment and two-way radio communications systems, used in ship-to-shore communications and found in service and emergency vehicles, in accordance with diagrams and manufacturers' specifications. Examine equipment for damaged components and loose or broken connections and wires; replace defective components and parts. Involves use of hand tools and electrical measuring instruments. May repair intercommunication telephone systems. Occupation may require federal Communications Commission Radiotelephone Operator's License, depending on the nature of repairs performed.

85599 - All Other Communications Equipment Mechanics, Installers, and Repairers - All other communications equipment mechanics, installers, and repairers not classified separately above.

Other Electrical and Electronic Equipment Mechanics, Installers, and Repairers

85702 - Telephone and Cable Television Line Installers and Repairers - String and repair telephone and television cable and other equipment for transmitting messages or TV programming. Duties include locating and repairing defects in existing systems; placing, rearranging, and removing underground or aerial cables; installing supports, insulation, or guy wire systems; and other auxiliary tasks necessary to maintain lines and cables.

85705 - Data Processing Equipment Repairers - Repair, maintain, and install electronic computers (mainframes, minis, and micros), peripheral equipment, and word processing systems.

85708 - Electronic Home Entertainment Equipment Repairers - Adjust and repair radios, televisions, stereo systems, recorders, video systems, or other electronic home entertainment equipment.

85711 - Electric Home Appliance and Power Tool Repairers - Repair, adjust, and install all types of electric household appliances, such as refrigerators, washing machines, dishwashers, vacuum cleaners, room air conditioners, and small appliances, including toasters, mixers, and food processors. Include repairers of electrical hand and bench tools, such as lathes, drills, saws, grinders, and polishers.

85717 - Electronics Repairers, Commercial and Industrial Equipment - Repair electronic equipment such as industrial controls, telemetering and missile control systems, radar systems, transmitters, and antennae, using hand tools and testing instruments. Exclude repairers of data processing equipment and home entertainment equipment.

85723 - Electrical Power-Line Installers and Repairers - Install and repair cables or wires used in electrical power or distribution systems. Install insulators, erect wooden poles and light or heavy duty transmission towers. Include Cable Splicers and Trouble Shooters. Exclude repairers of transformers and substation equipment, and telephone and telegraph communications workers.

85726 - Station Installers and Repairers, Telephone - Install and repair telephone station equipment, such as telephones, coin collectors, telephone booths, and switching-key equipment.

85728 - Electrical Installers and Repairers, Transportation Equipment - Install, adjust, and maintain electrical systems and wiring switches and fixtures on motor vehicles, trains, or aircraft.

85799 - All Other Electrical and Electronic Equipment Mechanics, Installers, and Repairers - All other electrical and electronic equipment mechanics, installers, and repairers not classified separately above.

Other Mechanics, Installers, and Repairers

85902 - Heating, Air Conditioning, and Refrigeration Mechanics and Installers - Install and repair heating, air conditioning, and refrigerating systems. Duties include installation and repair of oil burners, hot-air furnaces, heating stoves, and similar equipment in homes and commercial establishments, using hand and pipe threading tools. Includes the installation and repair of cooling and central air conditioning systems.

85905 - Precision Instrument Repairers - Install, test, repair, maintain, and adjust indicating, recording, telemetering, and controlling instruments used to measure and control variables such as pressure, flow, temperature, motion, force, and chemical composition. Include instrument repairers who repair, calibrate, and test instruments such as voltmeters, ammeters, and galvanometers.

85908 - Electromedical and Biomedical Equipment Repairers - Test, adjust, and repair electromedical equipment using hand tools and meters.

85911 - Electric Meter Installers and Repairers - Install electric meters on customers' premises or on pole. Test meters and perform necessary repairs. Turn current on/off by connecting/disconnecting service drop.

85926 - Office Machine and Cash Register Servicers - Repair and service office machines, such as adding, accounting, calculating, duplicating, and typewriting machines. Include the repair of manual, electrical, and electronic office machines. Exclude the repair of computerized systems and word processing systems.

85928 - Mechanical Control and Valve Installers and Repairers - Install, repair, and maintain mechanical regulating and controlling devices, such as gas regulators, thermostats, safety and flow valves, and other mechanical governors.

85938 - Installers and Repairers, Manufactured Buildings, Mobile Homes, and Travel Trailers - Install, repair, and maintain units and systems in mobile homes, prefabricated buildings, or travel trailers, using hand tools or power tools.

85944 - Gas Appliance Repairers - Repair and install gas appliances and equipment, such as ovens, dryers, and hot water heaters.

85947 - Coin and Vending Machine Servicers and Repairers - Install, service, adjust, and repair coin or vending machines placed in establishments on a concessional basis, using hand or power tools. Exclude repairers of electronic video games and other specialized electronic vending machines.

85951 - Bicycle Repairers - Repair and service bicycles using hand tools.

85953 - Tire Repairers and Changers - Repair and replace tires, tubes, treads, and related products on automobiles, buses, trucks, and other vehicles. Duties include mounting tires on wheels, balancing tires and wheels, and testing and repairing damaged tires and inner tubes.

85956 - Menders, Garments, Linens, and Related - Repair defects such as tears and holes in garments, linens, curtains, and draperies. Rebind cleaned blankets by hand or by operating a sewing machine.

85999 - All Other Mechanics, Installers, and Repairers - Include all mechanics, installers, and repairers not classified separately above.

Construction Trades and Extractive Occupations, Except Material-Moving

Carpentry and Related Occupations

87102 - Carpenters - Construct, erect, install and repair structures, fixtures, and equipment of wood, plywood, and wallboard, using carpentry tools and woodworking machines.

87108 - Drywall Installers - Apply plasterboard or other wallboard to ceilings and interior walls of buildings.

Electrical and Related Occupations

87202 - Electricians - Install, maintain, and repair electrical wiring, equipment, and fixtures. Insure that work is in accordance with relevant codes. May read blueprints. Include Protective Signal Installers and Repairers and Streetlight Servicers.

Masonry and Related Occupations

87302 - Brickmasons - Lay building materials, such as brick, structural tile, concrete, cinder, glass, gypsum, and terra cotta block (except stone), to construct or repair walls, partitions, arches, sewers, and other structures. Include Refractory Brickmasons.

87311 - Concrete and Terrazzo Finishers - Apply cement, sand, pigment, or marble chips to floors, stairways, and cabinet fixtures to finish and attain durable and decorative surfaces, according to specifications and drawings. Finish surfaces to remove imperfections from freshly poured concrete walls, roads, walkways, and ornamental stone facings of concrete structural products. Include Concrete Rubbers.

Painting and Related Occupations

87402 - Painters and Paperhangers, Construction and Maintenance - Painters: Paint walls, equipment, buildings, bridges, and other structural surfaces, using brushes, rollers, and spray guns. May mix colors or oils to obtain desired color or consistency. Paperhangers: Cover interior walls and ceilings of rooms with decorative wallpaper or fabric, or attach advertising posters on surfaces such as walls and billboards. Duties include removing old materials from surface to be papered.

Plumbing and Related Occupations

87502 - Plumbers, Pipefitters, and Steamfitters - Assemble, install, alter, and repair pipe systems (metal, plastic, ceramic, composition, etc.) that carry water, steam, air, or other liquids or gases.

87508 - Pipelayers - Lay glazed or unglazed clay, concrete, plastic, or cast-iron pipe for storm or sanitation sewers, drains, water mains, and oil or gas lines. Perform any combination of the following tasks: Grade trenches or culverts, position pipe, or seal joints.

87511 - Septic Tank Servicers and Sewer Pipe Cleaners - Clean and repair septic tanks, sewer lines, or drains. May patch walls and partitions of tank, replace damaged drain tile, or repair breaks in underground piping.

Floor Related Workers, Except Carpenters

87602 - Carpet Installers - Lay carpets or rugs in homes or buildings. Exclude workers who lay linoleum.

Road, Rail, and Related Construction and Maintenance Workers, Except Masonry Workers

87708 - Paving, Surfacing, and Tamping Equipment Operators - Operate equipment used for applying concrete, asphalt, or other materials to road beds, parking lots, or airport runways and taxiways, or equipment used for tamping gravel, dirt, or other materials. Include Concrete and Asphalt Paving Machine Operators, Form Tampers, Tamping Machine Operators, and Stone Spreader Operators.

87711 - Highway Maintenance Workers - Maintain highways, municipal and rural roads, airport runways, and rights-of-way in safe condition. Duties include patching broken or eroded pavement, and erecting and repairing guardrails, highway markers, and snow fences using a posthole digger, shovel, axe, saw, hammer and nails, or power tools. May also clear brush or plant trees along rights-of-way.

87714 - Rail-Track Laying and Maintenance Equipment Operators - Lay, repair, and maintain track for standard or narrow-gauge railroad equipment used in regular railroad service or in plant yards, quarries, sand and gravel pits, and mines. Include Ballast Cleaning Machine Operators and Road Bed Tamping Machine Operators.

Other Construction Trades Occupations

87802 - Insulation Workers - Cover and line structures with insulation using saws, knives, rasps, trowels, and other tools and implements. May also specialize in providing blown-in insulation.

87803 - Hazardous Materials Removal Workers - Remove, pack, transport, and/or dispose of hazardous materials, including asbestos, waste fuel, contaminated soil, etc. Specialized training and certification in hazardous materials handling and/or a confined entry permit are generally required.

87805 - Sheet Metal Duct Installers - Install prefabricated sheet metal ducts used for heating, air conditioning, or other purposes in buildings and similar structures.

87808 - Roofers - Cover roofs of structures with slate, asphalt, aluminum, wood, and related materials using brushes, knives, punches, hammers, and other tools. May spray roofs, sidings, and walls with material to bind, seal, insulate, or soundproof sections of structures.

87811 - Glaziers - Install glass in windows, skylights, storefronts, and display cases, or on surfaces such as building fronts, interior walls, ceilings, and tabletops. Exclude Glaziers who work primarily on production lines.

87814 - Structural Metal Workers - Raise, place, and unite girders, columns, and other structural steel members to form completed structures or structural frameworks. Include workers who erect metal storage tanks and assemble prefabricated metal buildings. Exclude reinforcing metal workers.

87817 - Fence Erectors - Erect and repair metal and wooden fences and fence gates around highways, industrial establishments, residences, or farms, using hand and power tools.

87899 - All Other Construction Trades Workers - All other construction trades workers not classified separately above.

Extractive and Related Occupations, Including Blasters

87902 - Earth Drillers, Except Oil and Gas - Operate a variety of drills to tap subsurface water and salt deposits, to remove core samples during mineral exploration or soil testing, and to facilitate the use of explosives in mining or construction. Include Core, Well, and Foundation Drill Operators and Horizontal and Earth Boring Machine Operators. Exclude Oil Well Drillers.

87905 - Blasters and Explosives Workers - Place explosives in holes or other spots and detonate the explosives to demolish structures or to loosen, remove, or displace earth, rock, or other materials. Include Tier-Detonator Blasters, Perforator Operators, and Seismograph Shooters.

87911 - Rotary Drill Operators, Oil and Gas Extraction - Set up or operate a variety of drills to remove petroleum products from the earth and to remove core samples for testing during oil and gas exploration. Include Core and Rotary Drillers and Well and Prospecting Drillers.

87914 - Derrick Operators, Oil and Gas Extraction - Rig derrick equipment and operate pumps to circulate mud through drill hole.

87917 - Service Unit Operators - Operate equipment to increase oil flow from producing wells or to remove stuck pipe, casing, tools, or other obstructions from drilling wells. Include Fishing-Tool Technicians.

87921 - Roustabouts - Perform a variety of assigned tasks in or around an oil field such as assembling or repairing equipment, digging drainage trenches, and loading/unloading trucks.

87999- All Other Construction and Extractive Workers, Except Helpers - All other construction and extractive workers, except helpers, not classified separately above.

Precision Production Occupations

Precision Metal Occupations

89108 - Machinists - Set up and operate variety of machine tools. Fit and assemble parts to make or repair machine tools and maintain industrial machines, applying knowledge of mechanics, shop mathematics, metal properties, layout, and machining procedures. Study specifications, such as blueprints, sketch, or description of part to be replaced, and plan sequence of operations.

89111 - Tool Grinders, Filers, Sharpeners, and Other Precision Grinders - Perform such operations as precision smoothing, sharpening, polishing, and grinding of metal objects by the wearing action of abrasive materials or machine files. Include Tool, Cylinder, and Card Grinders and Grinder Operators, Saw Filers, and Filer-Finishers.

89123 - Jewelers and Silversmiths - Jewelers: Fabricate, adjust, or repair jewelry. Silversmiths: Design, assemble, decorate, or repair silver articles. May specialize in one or more areas of the jewelry field, such as repairing, selling, or appraising. Exclude workers who perform a specialized operation such as fancy wire drawing.

89132 - Sheet Metal Workers - Fabricate, assemble, install, and repair sheet metal products and equipment, such as control boxes, drainpipes, and furnace casings. Work may involve any of the following: Set up and operate fabricating machines to cut, bend, and straighten sheet metal; shape metal over anvils, blocks, or forms using hammer; operate soldering and welding equipment to join sheet metal parts; inspect, assemble, and smooth seams and joints of burred surfaces.

89135 - Boilermakers - Construct, assemble, maintain, and repair stationary steam boilers and boiler house auxiliaries. Align structures or plate sections to assemble boiler frame tanks or vats, following blueprints. Work involves use of hand and power tools, plumb bobs, levels, wedges, dogs, or turnbuckles. Assist in testing assembled vessels. Direct cleaning of boilers and boiler furnaces. Inspect and repair boiler fittings, such as safety valves, regulators, automatic-control mechanisms, water columns, and auxiliary machines.

89199 - All Other Precision Metal Workers - All other precision metal workers not classified separately above.

Precision Wood Occupations

89308 - Wood Machinists - Set up and operate a variety of woodworking machines to surface, cut, and shape lumber, and to fabricate parts for wood products, such as door and window frames, furniture, and sashes, according to specifications. Exclude workers primarily concerned with one or a limited number of machine phases and report them according to their specialty.

89311 - Cabinetmakers and Bench Carpenters - Cut, shape, and assemble wooden articles, such as store fixtures, office equipment, cabinets, and high grade furniture. Set up and operate variety of machines, such as power saws, jointers, mortisers, tenoners, molders, and shapers, to cut and shape parts from wood stock. Exclude workers primarily concerned with one or a limited number of machine phases and report them according to their specialty.

89314 - Furniture Finishers - Shape, finish, and refinish damaged, worn, or used furniture or new high-grade furniture to specified color or finish, utilizing knowledge of wood properties, finishes, and furniture style.

Precision Textile, Apparel, and Furnishings Occupations

89502 - Fabric and Apparel Patternmakers and Layout Workers - Draw and construct sets of precision master patterns or layouts. Mark and cut fabrics and apparel according to blueprints or specifications.

89505 - Custom Tailors and Sewers - Design and make tailored garments, applying knowledge of garment design, construction, styling, and fabric. Alter, repair, or fit made-to-measure or ready-to-wear garments, sewing by hand or machine.

89508 - Upholsterers - Make, repair, and replace upholstery for household furniture or transportation vehicles, using knowledge of fabrics and methods of upholstery. Include workers in both manufacturing and nonmanufacturing industries. Exclude workers who perform a specialized operation such as Sewing Machine Operators, Assemblers, and Hand Cutters and Trimmers.

Precision Printing Occupations

89706 - Paste-Up Workers - Arrange and mount typeset material and illustrations into pasteup for printing reproduction, based on artist's or editor's layout.

89707 - Electronic Pagination System Operators - Using a computer screen, call up type and art elements from computer memory and position them into a completed page, using knowledge of typestyles and size and composition patterns. The composited page is then transmitted for production into film or directly into plates.

Precision Food Occupations

89802 - Slaughterers and Butchers - Work in a slaughtering or meatpacking establishment to prepare meat for sale by performing precision tasks such as stunning, skinning and trimming; cutting standard cuts of meat for marketing; cleaning and salting hides; making sausage; preparing meats for salting; and wrapping meats.

Other Precision Occupations

89905 - Precision Molders, Shapers, Casters, and Carvers, Except Jewelry and Foundry - Mold, shape, cast, or carve products consisting of clay, glass, plaster, concrete, and stone, or combinations of materials into semifinished or finished products.

89911 - Precision Detail Design Decorators and Painters - Design or decorate articles such as jewelry, furniture, glassware, pottery, or toys with paints, lacquers, enamels, shellac, or gilt. Types of processes include painting, carving, printing, drawing, artistic lettering, decorative screen making, advertising layout, and detail design of forms. Include Screen or Stencil Printers and Setters, Layout Formers, Gilders, Luster Applicators, and Tile Decorators. Exclude professional Artists and Designers and workers concerned with developing, coloring, and retouching photographs.

89914 - Precision Photographic Process Workers - Perform precision work involved in photographic processing, such as retouching photographic negatives and prints to stress specific features or identifying characteristics of subjects. Restore damaged and faded photographs. Color or shade drawings to create photographic likenesses using an airbrush. May also color photographs using oil colors, to produce natural, lifelike appearances according to specifications.

89921 – Precision Dental Laboratory Technicians - Construct and repair full or partial dentures or dental appliances or apparatus, following prescriptions or specifications of Dentists or Orthodontists. May also provide analytical and diagnostic services. Include Dental Ceramists, Crown and Bridge Technicians, and Orthodontic Technicians. Exclude Assistants, Bite-Block Makers, Opaquers, and Denture and Coiler Packers.

89999 - All Other Precision Workers - All other precision workers not classified separately above.

Machine Setters, Set-Up Operators, Operators, and Tenders

Machine Tool Cutting Setters, Operators, and Related Occupations - Metal and Plastic

91117 - Machine Tool Cutting Operators and Tenders, Metal and Plastic - Operate or tend one type of cutting machine tool which has previously been set up. Exclude workers who operate or tend more than one type of cutting machine. Types of cutting machine tools include: Sawing Machines, Grinding Machines, Lathe and Turning Machines, Buffing and Polishing Machines, Drilling and Boring Machines, Lapping and Honing Machines, Milling and Planing Machines.

Machine Forming Setters, Operators, and Related Occupations - Metal and Plastic

91321 - Machine Forming Operators and Tenders, Metal and Plastic - Operate or tend one type of forming machine which has previously been set up. Exclude workers who operate more than one type of forming machine. Types of forming machines include: Punching Machines, Rolling Machines, Shear and Slitter Machines, Press and Press Brake Machines, Extruding and Drawing Machines, Forging Machines.

Metal Fabricating and Related Machine Setters, Operators, and Related Occupations

91705 - Welding Machine Operators and Tenders - Operate or tend welding machines or robots that join or bond together components to fabricate metal products and assemblies, according to specifications and blueprints.

91714 - Metal Fabricators, Structural Metal Products - Fabricate and assemble structural metal products, such as frameworks or shells for machinery, ovens, tanks, and stacks, and metal parts for buildings and bridges, according to job order or blueprints.

Metal and Plastic Processing Machine Setters, Operators, and Related Occupations

91905 - Plastic Molding and Casting Machine Operators and Tenders - Operate or tend plastic molding machines, such as compression or injection molding machines, to mold, form, or cast thermoplastic materials to specified shape.

Other Metal and Plastic Machine Setters, Operators, and Related Occupations

92198 - All Other Metal and Plastic (Cutting, Forming, Fabricating, or Processing) Machine Operators and Tenders - All other metal and plastic machine operators and tenders not classified separately above.

Woodworking Machine Setters, Operators, and Related Occupations

92302 - Sawing Machine Setters and Set-up Operators - Set up or set up and operate wood-sawing machines. Examine blueprints, drawings, work orders, and patterns to determine size and shape of items to be sawed, sawing machines to set up, and sequence of sawing operations.

92305 - Head Sawyers - Operate head saws and feed carriages to saw logs into rough cants or boards from heading bolts.

92308 - Sawing Machine Operators and Tenders - Operate or tend wood-sawing machines, such as circular saws, band saws, multiple blade sawing machines, scroll saws, ripsaws, equalizer saws, power saws, and crozer machines. Duties include: sawing logs to specifications; cutting lumber to specified dimensions; sawing curved or irregular designs; trimming edges and removing defects from lumber; or cutting grooves, bevel, and miter according to specifications or work orders.

92311 - Woodworking Machine Setters and Set-up Operators, Except Sawing - Set up or set up and operate woodworking machines, such as lathes, drill presses, sanders, shapers, and planing machines, to perform woodworking operations. Exclude Sawing Machine Setters and Set-up Operators.

92314 - Woodworking Machine Operators and Tenders, Except Sawing - Operate or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood-nailing machines to perform woodworking operations. Exclude Sawyers.

Printing, Binding, and Related Occupations

92512 - Offset Lithographic Press Setters and Set-up Operators - Set up or set up and operate offset printing press, either sheet or web fed, to print single and multicolor copy from lithographic plates. Examine job order to determine press operating time, quantity to be printed, and stock specifications.

92524 - Screen Printing Machine Setters and Set-up Operators - Set up or set up and operate screen printing machines to print designs onto articles and materials, such as glass or plasticware, cloth, and paper.

92525 - Bindery Machine Setters and Set-up Operators - Set up or set up and operate machines that perform some or all of the following functions in order to produce books, magazines, pamphlets, catalogs, and other printed materials: gathering, folding, cutting, stitching, rounding and backing, supering, casing-in, lining, pressing, and trimming.

92541 - Typesetting and Composing Machine Operators and Tenders - Operate or tend typesetting and composing equipment, such as phototypesetters, linotype or monotype keyboard machines, photocomposers, linocasters, and photoletterers. Exclude Data Entry Keyers of computerized systems.

92543 - Printing Press Machine Operators and Tenders - Operate or tend various types of printing machines, such as offset lithographic presses, letter or letterset presses, flexographic or gravure presses, to produce print on paper or other materials such as plastic, cloth, or rubber.

92546 - Bindery Machine Operators and Tenders - Operate or tend binding machines that round, back, case, line stitch, press, fold, trim, or perform other binding operations on books and related articles. Exclude Hand Bindery Workers and Machine Feeders and Offbearers.

Textile and Related Setters, Operators, and Related Occupations

92717 - Sewing Machine Operators, Garment - Operate or tend sewing machines to perform garment sewing operations, such as joining, reinforcing, or decorating garments or garment parts. Include sewing machine operators and tenders who perform specialized or automatic sewing machine functions, such as buttonhole making or tacking.

92721 - Sewing Machine Operators, Nongarment - Operate or tend sewing machines to join together, reinforce, decorate, or perform related sewing operations in the manufacture of nongarment products, such as upholstery, draperies, linens, carpets, and mattresses.

92726 - Laundry and Dry-Cleaning Machine Operators and Tenders, Except Pressing - Operate or tend washing or dry-cleaning machines to wash or dry-clean commercial, industrial, or household articles, such as cloth garments, suede, leather, furs, blankets, draperies, fine linens, rugs, and carpets.

92728 - Pressing Machine Operators and Tenders, Textile, Garment, and Related Materials - Operate or tend pressing machines, such as hot-head pressing, steam pressing, automatic pressing, ironing, plunger pressing, and hydraulic pressing machines, to press and shape articles such as leather, fur, and cloth garments, drapes, slipcovers, handkerchiefs, and millinery. Exclude Delicate Fabric (Precision) Pressers.

Other Machine Setters, Set-Up Operators, Operators, and Tenders- Except Metal and Plastic

92905 - Motion Picture Projectionists - Set up and operate motion picture projection and sound reproduction equipment.

92908 - Photographic Processing Machine Operators and Tenders - Operate or tend photographic processing machines, such as motion picture film printing machines, photographic printing machines, film developing machines, and mounting presses, according to job specifications.

92923 - Furnace, Kiln, Oven, Drier, or Kettle Operators and Tenders - Operate or tend heating equipment other than basic metal or plastic processing equipment. Oven Operators or Tenders: Bake fiberglass or painted products, fuse glass or enamel to metal products, carbonize coal, or cure rubber or other products. Furnace Operators or Tenders: Anneal glass, roast sulfur, convert chemicals, or process petroleum. Kettle Operators and Tenders: Boil soap, or melt antimony or asphalt materials. Drier Operators and Tenders: Remove moisture from paper, chemicals, ore, clay products, or slurry. Kiln Operators and Tenders: Heat minerals, dry lumber, fire greenware, anneal glassware, or bake clay products.

92926 - Boiler Operators and Tenders, Low Pressure - Operate or tend low pressure stationary steam boilers and auxiliary steam equipment, such as pumps, compressors and air conditioning equipment, to supply steam heat for office buildings, apartment houses, or industrial establishments; to maintain steam at specified pressure aboard marine vessels; or to generate and supply compressed air for operation of pneumatic tools, hoists, and air lances.

92944 - Cutting and Slicing Machine Operators and Tenders - Operate or tend machines to cut or slice any of a wide variety of products or materials, such as tobacco, food, paper, roofing slate, glass, stone, rubber, cork, and insulating material. Exclude Metal, Wood, and Plastic Sawing Machine Operators and Tenders, and Textile Cutting Machine Operators and Tenders.

92947 - Painters, Transportation Equipment - Operate or tend painting machines to paint surfaces of transportation equipment, such as automobiles, buses, trucks, boats, and airplanes.

92953 - Coating, Painting, and Spraying Machine Operators and Tenders - Coating Machine Operators or Tenders: Operate or tend machines to coat any of a wide variety of items: Coating food products with sugar, chocolate, or butter; coat paper and paper products with chemical solutions, wax, or glazes; or coat fabric with rubber or plastic. Painting and Spraying Machine Operators and Tenders: Operate or tend machines to spray or paint decorative, protective, or other coating or finish, such as adhesive, lacquer, paint, stain, latex, preservative, oil, or other solutions. May apply coating or finish to any of a wide variety of items or materials, such as wood and wood products, ceramics, and glass. Include workers who apply coating or finish to materials preparatory to further processing or to consumer use.

92956 - Cementing and Gluing Machine Operators and Tenders - Operate or tend cementing and gluing machines to join together items to form a completed product or to form an article for further processing. Processes include: Joining veneer sheets into plywood; gluing paper to glass wool, cardboard or paper; joining rubber and rubberized fabric parts, plastic, simulated leather, and other materials.

92958 - Cleaning, Washing, and Pickling Equipment Operators and Tenders - Operate or tend machines to wash or clean items, such as barrels or kegs, glass products, tinplate surfaces, dried fruit, pulp, animal stock, coal, manufactured articles, plastic, or rubber, to remove impurities preparatory to further processing.

92962 - Separating, Filtering, Clarifying, Precipitating, and Still Machine Operators and Tenders - Operate or tend machines such as filter presses, shaker screens, centrifuges, condenser tubes, precipitator tanks, fermenting tanks, evaporating tanks, scrubbing towers and batch stills. These machines extract, sort, or separate liquids, gases, or solid materials from other materials in order to recover a refined product or material. Exclude workers who operate equipment to control chemical changes or reactions.

92965 - Crushing, Grinding, Mixing, and Blending Machine Operators and Tenders - Crushing, Grinding, and Polishing Machine Operators and Tenders: Operate or tend machines to crush or grind any of a wide variety of materials, such as coal, glass, plastic, dried fruit, grain, stone, chemicals, food, or rubber; or operate or tend machines that buff and polish materials or products, such as stone, glass, slate, plastic or metal trim, bowling balls, or eyeglasses. Mixing and Blending Machine Operators and Tenders: Operate or tend machines to mix or blend any of a wide variety of materials, such as spices, dough batter, tobacco, fruit juices, chemicals, livestock feed, food products, color pigments, or explosive ingredients.

92968 - Extruding, Forming, Pressing, and Compacting Machine Setters and Set-Up Operators - Set up or set up and operate machines, such as glass forming machines, plodder machines, and tuber machines, to manufacture any of a wide variety of products, such as soap bars, formed rubber, glassware, food, brick, and tile, by means of extruding, compressing, or compacting.

92971 - Extruding, Forming, Pressing, and Compacting Machine Operators and Tenders - Operate or tend machines to shape and form any of a wide variety of manufactured products, such as glass bulbs, molded food and candy, rubber goods, clay products, wax products, tobacco plugs, cosmetics, or paper products, by means of extruding, compressing or compacting.

92974 - Packaging and Filling Machine Operators and Tenders - Operate or tend machines, such as filling machines, casing-running machines, ham-rolling machines, preservative-filling machines, baling machines, wrapping machines, and stuffing machines, to prepare industrial or consumer products, such as gas cylinders, meat and other food products, tobacco, insulation, ammunition, stuffed toys, and athletic equipment for storage or shipment.

92998 - All Other Machine Operators and Tenders - All other machine operators and tenders not classified separately above.

Hand Working Occupations, Including Assemblers and Fabricators

Precision Assemblers

93114 - Electrical and Electronic Equipment Assemblers, Precision - Assemble or modify prototypes or final assemblies of electrical or electronic equipment, such as missile control systems, radio and test equipment, computers, numerical control machine tools, radar, sonar, telemetering systems, or appliances. Include workers who primarily assemble electrical systems for machinery.

Other Hand Workers, Including Assemblers and Fabricators

93914 - Welders and Cutters - Use hand-welding and flame-cutting equipment, such as arc welders, gas welders, and gas torches, to weld together metal components of such products as pipelines, automobiles, boilers, and ships; to join together components of fabricated sheet metal assemblies; or to cut, trim, or scarf metal objects to dimensions, as specified by layout, work orders, or blueprints.

93921 - Pressers, Hand - Press articles to remove wrinkles, flatten seams, and give shape by using hand iron. Articles pressed include: Drapes, knit goods, millinery parts, parachutes, garments, slipcovers, and textiles such as lace, rayon, and silk. May block (shape) knitted garments after cleaning. May press leather goods.

93926 - Cutters and Trimmers, Hand - Use hand tools or hand-held power tools to cut and trim a variety of manufactured items, such as stone, glass, or rubber. Exclude Portable Machine Cutters who use patterns to cut multiple layers of fabric.

93938 - Meat, Poultry, and Fish Cutters and Trimmers, Hand - Use hand tools to perform a wide variety of food cutting and trimming tasks that require skills less than that of the precision level. Include Meat Boners, Carcass Splitters, Poultry Eviscerators, Fish Cleaners and Butchers, Skinners, and Stickers.

93941 - Metal Pourers and Casters, Basic Shapes - Operate hand-controlled mechanisms adjunctive to specialized machinery and equipment to pour and regulate the flow of molten metal into molds for producing castings or ingots of specific quality and size. Include Steel Pourers, Casters, and Ladle and Metal Pourers.

93947 - Painting, Coating, and Decorating Workers, Hand - Paint, coat, and decorate, using hand tools or hand-held power tools, a wide variety of manufactured items, such as furniture, glass and plateware, lamps, jewelry, books, or leather products. Include Inlayers, Stainers, Enamelers, and Decal Appliers.

93953 - Grinding and Polishing Workers, Hand - Grind and polish, using hand tools or hand-held power tools, a wide variety of metal, stone, clay, plastic, and glass objects or parts. Include Grinders and Chippers, Polishers and Buffers, Metal Sanders and Finishers, Glass Grinders and Polishers, and Plastic Buffers and Finishers. Exclude precision-level workers.

93956 - Assemblers and Fabricators, Except Machine, Electrical, Electronic, and Precision - Assemble or fit together parts to form complete units or subassemblies at a bench, conveyor line, or on the floor. Work may involve the use of hand tools, power tools, and special equipment in order to carry out fitting and assembly operations. Include assemblers whose duties are of a non-precision nature. Exclude electrical, electronic, machine, and precision assemblers, and workers who perform specialized operations exclusively as a part of assembly operations, such as riveting, welding, soldering, machining, or sawing.

93999 - All Other Hand Workers - All other hand workers not classified separately above.

Plant and System Occupations

95002 - Water and Liquid Waste Treatment Plant and System Operators - Operate or control an entire process or system of machines, often through the use of panelboards, control boards, or semiautomatic equipment, to transfer or treat water and/or liquid waste.

95017 - Gaugers - Gauge and test oil in storage tanks. Regulate flow of oil into pipelines at wells, tank farms, refineries, and marine and rail terminals, following prescribed standards and regulations.

95023 - Auxiliary Equipment Operators, Power - Control and maintain auxiliary equipment, such as pumps, fans, compressors, condensers, feedwater heaters, filters, and chlorinators, that supply water, fuel, lubricants, air, and auxiliary power for turbines, generators, boilers, and other power-generating plant facilities.

95028 - Power Distributors and Dispatchers - Coordinate, regulate, or distribute electricity or steam in generating stations and substations, and over electric power lines. May work for utility company or in a large industrial establishment. May spend some time generating power.

95032 - Stationary Engineers - Operate and maintain stationary engines and mechanical equipment to provide utilities for buildings or industrial processes. Operate equipment such as steam engines, generators, motors, turbines, and steam boilers.

95099 - All Other Plant and System Operators - All other plant and system operators not classified separately above.

Transportation and Material-Moving Machine and Vehicle Operators Motor Vehicle Operators

97102 - Truck Drivers, Heavy or Tractor-Trailer - Drive a tractor-trailer combination or a truck with a capacity of at least 3 tons, to transport and deliver goods, livestock, or materials in liquid, loose or packaged form. May be required to unload truck.

97105 - Truck Drivers, Light, Include Delivery and Route Workers - Drive a truck, van, or automobile with a capacity under 3 tons. May drive light truck to deliver or pick up merchandise. May load and unload truck.

97108 - Bus Drivers, Except School - Drive bus, transporting passengers over specified routes to local or distant points according to a time schedule. Assist passengers with baggage. Collect tickets or cash fares.

97111 - Bus Drivers, School - Transport students between pickup points and school. Maintain order during trip and adhere to safety rules when loading and unloading pupils.

97114 - Taxi Drivers and Chauffeurs - Drive automobiles, limousines, custom-built sedans, or hearses to transport passengers or cargo. May drive automobiles for delivery. Exclude Ambulance Drivers and Bus Drivers.

97117 - Driver/Sales Workers - Drive truck or other vehicle over established routes to: Deliver and sell goods, such as food products; pick up and deliver items, such as laundry; or refill and collect coins from vending machines. Include Newspaper Delivery Drivers.

97199 - All Other Motor Vehicle Operators - All other motor vehicle operators not classified separately above.

Rail Transportation Occupations

97305 - Locomotive Engineers - Drive electric, diesel-electric, steam, or gas-turbine-electric locomotives to transport passengers or freight. Interpret train orders, block or semaphore signals, and railroad rules and regulations.

97308 - Rail Yard Engineers, Dinkey Operators, and Hostlers - Drive switching or other locomotive or dinkey engines within railroad yard, industrial plant, quarry, construction project, or similar location.

Air Transportation Occupations

97702 - Aircraft Pilots and Flight Engineers - Pilot and navigate flight of private or commercial aircraft for the transportation of passengers, freight, mail, or for other purposes. Must be federally licensed. Include workers concerned with flight operations and maintenance when a pilot's or flight engineer's license is required. Include Test Pilots, Helicopter Pilots, and pilots who accompany other pilots to periodically test and review proficiency.

Other Transportation and Related Occupations

97805 - Service Station Attendants - Service automobiles, buses, trucks, boats, and other automotive or marine vehicles with fuel, lubricants, and accessories. Collect payment for services and supplies. May lubricate vehicle, change motor oil, install antifreeze, or replace lights or other accessories such as windshield wiper blades or fan belts. May repair or replace tires.

97808 - Parking Lot Attendants - Park autos or issue tickets for customers in a parking lot or garage.

97899 - All Other Transportation and Related Workers - All other transportation and related workers not classified separately above.

Material Moving Equipment Operators

97911 - Wellhead Pumpers - Operate power pumps and auxiliary equipment to produce artificial flow of oil or gas from wells in oil field.

97921 - Gas Compressor Operators - Operate steam or internal combustion engines to transmit, compress, or recover gases, such as butane, nitrogen, hydrogen, and natural gas, in various production processes.

97923 - Excavating and Loading Machine Operators - Operate or tend machinery equipped with scoops, shovels, or buckets, to excavate and load loose materials. Exclude Dredge and Dragline Operators.

97926 - Dragline Operators - Operate power-driven crane equipment with dragline bucket to excavate or move sand, gravel, mud, or other materials.

97938 - Grader, Bulldozer, and Scraper Operators - Operate machine or vehicle equipped with blades to remove, distribute, level, or grade earth. Exclude Paving, Surfacing, and Tamping Equipment Operators.

97944 - Crane and Tower Operators - Operate mechanical boom and cable or tower and cable equipment to lift and move materials, machines, or products in many directions. Exclude Dragline Operators.

97947 - Industrial Truck and Tractor Operators - Operate gasoline or electric-powered industrial trucks or tractors equipped with forklift, elevated platform, or trailer hitch to move materials around a warehouse, storage yard, factory, construction site, or similar location. Exclude Logging Tractor Operators.

97951 - Conveyor Operators and Tenders - Control or tend conveyors or conveyor systems that move materials or products to and from stockpiles, processing stations, departments, vehicles, and underground workings. May control speed and routing of materials or products.

97953 - Pump Operators - Tend, control, or operate power-driven, stationary, or portable pumps and manifold systems, to transfer gases, liquids, slurries, or powdered materials to and from various vessels and processes.

97956 - Operating Engineers - Operate several types of power construction equipment, such as compressors, pumps, hoists, derricks, cranes, shovels, tractors, scrapers, or motor graders to excavate, move and grade earth, erect structures, or pour concrete or other hard surface pavement. May repair and maintain equipment in addition to other duties. Exclude workers who specialize in operation of a single type of heavy equipment, such as a bulldozer or crane.

97989 - All Other Material-Moving Equipment Operators - All other material-moving equipment operators not classified separately above.

97999 - All Other Transportation and Material-Moving Equipment Operators - All other transportation and material-moving equipment operators not classified separately above.

Helpers, Laborers, and Material Movers, Hand - Except Agriculture and Forestry Laborers

Helpers - Mechanics and Repairers

98102 - Helpers, Mechanics and Repairers - Help mechanics and repairers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.

Helpers - Construction Trades and Extractive Workers

98311 - Helpers, Brick and Stonemasons and Hard Tile Setters - Help Brickmasons, Stonemasons, or Hard Tile Setters by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Brickmasons, Stonemasons, or Hard Tile Setters.

98312 - Helpers, Carpenters and Related Workers - Help Carpenters or carpentry-related craft workers by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Carpenters or carpentry-related craft workers.

98313 - Helpers, Electricians and Power-Line Transmission Installers - Help Electricians or Power-line Transmission Installers by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Electricians or Power-line Transmission Installers.

98314 - Helpers, Painters, Paperhangers, Plasterers, and Stucco Masons - Help Painters, Paperhangers, Plasterers, or Stucco Masons by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Painters, Paperhangers, Plasterers, or Stucco Masons.

98315 - Helpers, Plumbers, Pipefitters, and Steamfitters - Help Plumbers, Pipefitters, or Steamfitters by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Plumbers, Pipefitters, or Steamfitters.

98316 - Helpers, Roofers - Help Roofers by performing duties of lesser skill. Duties include supplying or holding materials or tools, and cleaning work area and equipment. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude construction or maintenance laborers who do not primarily assist Roofers.

98319 - Helpers, All Other Construction Trades Workers - All other construction trades helpers not classified separately above.

98323 - Helpers, Extractive Workers - Help extractive craft workers, such as Earth Drillers, Blasters and Explosives Workers, Derrick Operators, and Mining Machine Operators, by performing duties of lesser skill. Duties include supplying equipment or cleaning work area. Exclude apprentice workers and report them with the appropriate construction or maintenance trade occupation. Exclude laborers who do not primarily assist extractive craft workers.

Machine Feeders and Offbearers

98502 - Machine Feeders and Offbearers - Feed materials into or remove materials from machines or equipment that is automatic or tended by other workers.

Freight, Stock, and Material Movers, Hand

98705 - Refuse and Recyclable Material Collectors - Collect refuse or recyclable materials from containers and put into truck, on a designated route.

98799 - All Other Freight, Stock, and Material Movers, Hand - All other freight, stock, and material movers, hand, not classified separately above.

Other Helpers, Laborers, and Material Movers, Hand

98902 - Hand Packers and Packagers - Pack or package by hand a wide variety of products and materials. Exclude workers whose jobs require more than minimum training.

98905 - Vehicle Washers and Equipment Cleaners - Wash or otherwise clean vehicles, machinery, and other equipment. Use such materials as water, cleaning agents, brushes, cloths, and hoses. Exclude Janitors and Building Cleaners.

98999 - All Other Helpers, Laborers, and Material Movers, Hand - All other helpers, laborers, and material movers, hand, not classified separately above.

Appendix

Wage Conversion Table

Survey Methodology

Wage Conversion Table

Hourly	Weekly	Monthly	Annually
$5.00	$200.00	$866.67	$10,400.00
5.10	204.00	884.00	10,608.00
5.20	208.00	901.33	10,816.00
5.30	212.00	918.67	11,024.00
5.40	216.00	936.00	11,232.00
5.50	220.00	953.33	11,440.00
5.60	224.00	970.67	11,648.00
5.70	228.00	988.00	11,856.00
5.80	232.00	1,005.33	12,064.00
5.90	236.00	1,022.67	12,272.00
6.00	240.00	1,040.00	12,480.00
6.10	244.00	1,057.33	12,688.00
6.20	248.00	1,074.67	12,896.00
6.30	252.00	1,092.00	13,104.00
6.40	256.00	1,109.33	13,312.00
6.50	260.00	1,126.67	13,520.00
6.60	264.00	1,144.00	13,728.00
6.70	268.00	1,161.33	13,936.00
6.80	272.00	1,178.67	14,144.00
6.90	276.00	1,196.00	14,352.00
7.00	280.00	1,213.33	14,560.00
7.10	284.00	1,230.67	14,768.00
7.20	288.00	1,248.00	14,976.00
7.30	292.00	1,265.33	15,184.00
7 40	296.00	1,282.67	15,392.00
7.50	300.00	1,300.00	15,600.00
7.60	304.00	1,317.33	15,808.00
7.70	308.00	1,334.67	16,016.00
7.80	312.00	1,352.00	16,224.00
7.90	316.00	1,369.33	16,432.00
8.00	320.00	1,386.67	16,640.00
8.10	324.00	1,404.00	16,848.00
8.20	328.00	1,421.33	17,056.00
8.30	332.00	1,438.67	17,264.00
8.40	336.00	1,456.00	17,472.00
8.50	340.00	1,473.33	17,680.00
8.60	344.00	1,490.67	17,888.00
8.70	348.00	1,508.00	18,096.00
8.80	352.00	1,525.33	18,304.00
8.90	356.00	1,542.67	18,512.00
9.00	360.00	1,560.00	18,720.00
9.10	364.00	1,577.33	18,928.00
9.20	368.00	1,594.67	19,136.00
9.30	372.00	1,612.00	19,344.00
9.40	376.00	1,629.33	19,552.00
9.50	380.00	1,646.67	19,760.00
9.60	384.00	1,664.00	19,968.00
9.70	388.00	1,681.33	20,176.00
9.80	392.00	1,698.67	20,384.00
9.90	396.00	1,716.00	20,592.00
10.00	400.00	1,733.33	20,800.00
10.10	404.00	1,750.67	21,008.00
10.20	408.00	1,768.00	21,216.00
10.30	412.00	1,785.33	21,424.00
10.40	416.00	1,802.67	21,632.00

Hourly	Weekly	Monthly	Annually
$10.50	$420.00	$1,820.00	$21,840.00
10.60	424.00	1,837.33	22,048.00
10.70	428.00	1,854.67	22,256.00
10.80	432.00	1,872.00	22,464 00
10.90	436.00	1,889.33	22,672.00
11.00	440.00	1,906.67	22,880.00
11.10	444.00	1,924.00	23,088.00
11.20	448.00	1,941.33	23,296.00
11.30	452.00	1,958.67	23,504.00
11.40	456.00	1,976.00	23,712.00
11.50	460.00	1,993.33	23,920.00
11.60	464.00	2,010.67	24,128.00
11.70	468.00	2,028.00	24,336.00
11.80	472.00	2,045.33	24,544.00
11.90	476.00	2,062.67	24,752.00
12.00	480.00	2,080.00	24,960.00
12.10	484.00	2,097.33	25,168.00
12.20	488.00	2,114.67	25,376.00
12.30	492.00	2,132.00	25,584.00
12.40	496.00	2,149.33	25,792.00
12.50	500.00	2,166.67	26,000.00
12.60	504.00	2,184.00	26,208.00
12.70	508.00	2,201.33	26,416.00
12.80	512.00	2,218.67	26,624.00
12.90	516.00	2,236.00	26,832.00
13.00	520.00	2,253.33	27,040.00
13.10	524.00	2,270.67	27,248.00
13.20	528.00	2,288.00	27,456.00
13.30	532.00	2,305.33	27,664.00
13.40	536.00	2,322.67	27,872.00
13.50	540.00	2,340.00	28,080.00
13.60	544.00	2,357.33	28,288.00
13.70	548.00	2,374.67	28,496.00
13.80	552.00	2,392.00	28,704.00
13.90	556.00	2,409.33	28,912.00
14.00	560.00	2,426.67	29,120.00
14.10	564.00	2,444.00	29,328.00
14.20	568.00	2,461.33	29,536.00
14.30	572.00	2,478.67	29,744.00
14.40	576.00	2,496.00	29,952.00
14.50	580.00	2,513.33	30,160.00
14.60	584.00	2,530.67	30,368.00
14.70	588.00	2,548.00	30,576.00
14.80	592.00	2,565.33	30,784.00
14.90	596.00	2,582.67	30,992.00
15.00	600.00	2,600.00	31,200.00
15.10	604.00	2,617.33	31,408.00
15.20	608.00	2,634.67	31,616.00
15.30	612.00	2,652.00	31,824.00
15.40	616.00	2,669.33	32,032.00
15.50	620.00	2,686.67	32,240.00
15.60	624.00	2,704.00	32,448.00
15.70	628.00	2,721.33	32,656.00
15.80	632.00	2,738.67	32,864.00
15.90	636.00	2,756.00	33,072.00

Wage Conversion Table

Hourly	Weekly	Monthly	Annually	Hourly	Weekly	Monthly	Annually
$16.00	$640.00	$2,773.33	$33,280.00	$21.50	$860.00	$3,726.67	$44,720.00
16.10	644.00	2,790.67	33,488.00	21.60	864.00	3,744.00	44,928.00
16.20	648.00	2,808.00	33,696.00	21.70	868.00	3,761.33	45,136.00
16.30	652.00	2,825.33	33,904.00	21.80	872.00	3,778.67	45,344.00
16.40	656.00	2,842.67	34,112.00	21.90	876.00	3,796.00	45,552.00
16.50	660.00	2,860.00	34,320.00	22.00	880.00	3,813.33	45,760.00
16.60	664.00	2,877.33	34,528.00	22.10	884.00	3,830.67	45,968.00
16.70	668.00	2,894.67	34,736.00	22.20	888.00	3,848.00	46,176.00
16.80	672.00	2,912.00	34,944.00	22.30	892.00	3,865.33	46,384.00
16.90	676.00	2,929.33	35,152.00	22.40	896.00	3,882.67	46,592.00
17.00	680.00	2,946.67	35,360.00	22.50	900.00	3,900.00	46,800.00
17.10	684.00	2,964.00	35,568.00	22.60	904.00	3,917.33	47,008.00
17.20	688.00	2,981.33	35,776.00	22.70	908.00	3,934.67	47,216.00
17.30	692.00	2,998.67	35,984.00	22.80	912.00	3,952.00	47,424.00
17.40	696.00	3,016.00	36,192.00	22.90	916.00	3,969.33	47,632.00
17.50	700.00	3,033.33	36,400.00	23.00	920.00	3,986.67	47,840.00
17.60	704.00	3,050.67	36,608.00	23.10	924.00	4,004.00	48,048.00
17.70	708.00	3,068.00	36,816.00	23.20	928.00	4,021.33	48,256.00
17.80	712.00	3,085.33	37,024.00	23.30	932.00	4,038.67	48,464.00
17.90	716.00	3,102.67	37,232.00	23.40	936.00	4,056.00	48,672.00
18.00	720.00	3,120.00	37,440.00	23.50	940.00	4,073.33	48,880.00
18.10	724.00	3,137.33	37,648.00	23.60	944.00	4,090.67	49,088.00
18.20	728.00	3,154.67	37,856.00	23.70	948.00	4,108.00	49,296.00
18.30	732.00	3,172.00	38,064.00	23.80	952.00	4,125.33	49,504.00
18.40	736.00	3,189.33	38,272.00	23.90	956.00	4,142.67	49,712.00
18.50	740.00	3,206.67	38,480.00	24.00	960.00	4,160.00	49,920.00
18.60	744.00	3,224.00	38,688.00	24.10	964.00	4,177.33	50,128.00
18.70	748.00	3,241.33	38,896.00	24.20	968.00	4,194.67	50,336.00
18.80	752.00	3,258.67	39,104.00	24.30	972.00	4,212.00	50,544.00
18.90	756.00	3,276.00	39,312.00	24.40	976.00	4,229.33	50,752.00
19.00	760.00	3,293.33	39,520.00	24.50	980.00	4,246.67	50,960.00
19.10	764.00	3,310.67	39,728.00	24.60	984.00	4,264.00	51,168.00
19.20	768.00	3,328.00	39,936.00	24.70	988.00	4,281.33	51,376.00
19.30	772.00	3,345.33	40,144.00	24.80	992.00	4,298.67	51,584.00
19.40	776.00	3,362.67	40,352.00	24.90	996.00	4,316.00	51,792.00
19.50	780.00	3,380.00	40,560.00	25.00	1,000.00	4,333.33	52,000.00
19.60	784.00	3,397.33	40,768.00	25.10	1,004.00	4,350.67	52,208.00
19.70	788.00	3,414.67	40,976.00	25.20	1,008.00	4,368.00	52,416.00
19.80	792.00	3,432.00	41,184.00	25.30	1,012.00	4,385.33	52,624.00
19.90	796.00	3,449.33	41,392.00	25.40	1,016.00	4,402.67	52,832.00
20.00	800.00	3,466.67	41,600.00	25.50	1,020.00	4,420.00	53,040.00
20.10	804.00	3,484.00	41,808.00	25.60	1,024.00	4,437.33	53,248.00
20.20	808.00	3,501.33	42,016.00	25.70	1,028.00	4,454.67	53,456.00
20.30	812.00	3,518.67	42,224.00	25.80	1,032.00	4,472.00	53,664.00
20.40	816.00	3,536.00	42,432.00	25.90	1,036.00	4,489.33	53,872.00
20.50	820.00	3,553.33	42,640.00	26.00	1,040.00	4,506.67	54,080.00
20.60	824.00	3,570.67	42,848.00	26.10	1,044.00	4,524.00	54,288.00
20.70	828.00	3,588.00	43,056.00	26.20	1,048.00	4,541.33	54,496.00
20.80	832.00	3,605.33	43,264.00	26.30	1,052.00	4,558.67	54,704.00
20.90	836.00	3,622.67	43,472.00	26.40	1,056.00	4,576.00	54,912.00
21.00	840.00	3,640.00	43,680.00	26.50	1,060.00	4,593.33	55,120.00
21.10	844.00	3,657.33	43,888.00	26.60	1,064.00	4,610.67	55,328.00
21.20	848.00	3,674.67	44,096.00	26.70	1,068.00	4,628.00	55,536.00
21.30	852.00	3,692.00	44,304.00	26.80	1,072.00	4,645.33	55,744.00
21.40	856.00	3,709.33	44,512.00	26.90	1,076.00	4,662.67	55,952.00

Survey Method and Reliability Statement for the 1998 OES Survey All-Industry Wage Rate Estimates

General

The Occupational Employment Statistics (OES) survey is an annual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments, by industry. The survey samples approximately 400,000 establishments nationally per year, taking three years to fully collect the sample of 1.2 million establishments. The Bureau of Labor Statistics (BLS) and the Employment and Training Administration (ETA) provide funding for the survey. BLS provides the procedures and technical support, while the State Employment Security Agencies (SESAs) collect the data. The SESAs produce occupational estimates by detailed industries for local areas and the states. BLS produces similar industry-specific estimates for the nation as well as employment and wage estimates for 750 occupations across all industries for the nation, each of the 50 states plus the District of Columbia, and Metropolitan Statistical Areas (MSAs).

Survey Definitions and Concepts

Key definitions are as follows:

An *establishment* is an economic unit, such as a factory, mine, or store which produces goods or services. It is generally at a single location and engaged predominantly in one economic activity.

The OES survey defines *employment* as the number of workers who can be classified as full-time or part-time employees; workers on paid vacations or other types of leave; workers on unpaid short-term absences; salaried officers, executives, and staff members of incorporated firms; employees temporarily assigned to other units; and employees for whom the reporting unit is their permanent duty station regardless of whether that unit prepares their paycheck. The survey excludes the self-employed, owners/partners of unincorporated firms, and unpaid family workers. Employees are reported in the occupation in which they are working, not necessarily for which they were trained.

Employment represents the estimate of total wage and salary employment in an occupation across the industries in which it was reported. The OES survey form sent to an establishment contains between 50 and 225 OES occupations. The number of occupations listed on a form depends on the industry classification and size class of the sampled establishments. To reduce paperwork and respondent burden, no survey form contains every OES occupation.

The OES classification system uses seven *occupational divisions* to categorize workers in one of 750 detailed occupations.

The seven divisions are as follows:

- Managerial & administrative occupations
- Professional, paraprofessional, and technical occupations
- Sales & related occupations
- Clerical & administrative support occupations
- Service occupations
- Agriculture, forestry, fishing, & related occupations
- Production, construction, operating, maintenance, & material handling occupations

Wages for the OES survey are straight-time, gross pay, exclusive of premium pay. Included are base rate, cost-of-living allowances, guaranteed pay, hazardous-duty pay, incentive pay, including commissions and production bonuses, and on-call pay. Excluded are back pay, jury duty pay, overtime pay, severance pay, shift differentials, nonproduction bonuses, and tuition reimbursements.

The OES survey collects wage data in 11 intervals. Employers report the number of employees in an occupation per each wage range. The wage intervals used for the 1998 survey are as follows:

	A	B	C	D	E	F	G	H	I	J	K
Hourly	Under $6.75	$6.75-$8.49	$8.50-$9.99	$10.00-$11.24	$11.25-$13.24	$13.25-$15.74	$15.75-$19.24	$19.25-$24.24	$24.25-$43.24	$43.25-$60.00	$60.01 and over
Annual	Under $14,040	$14,040-$17,659	$17,660-$20,779	$20,780-$23,399	$23,400-$27,559	$27,560-$32,759	$32,760-$40,039	$40,040-$50,439	$50,440-$89,959	$89,960-$124,820	$124,821 and over

Hourly versus annual wage reporting: For each occupation, respondents are asked to report the number of employees paid within specific wage intervals. The intervals are defined both as hourly rates and the corresponding annual rates, where the annual rates are constructed by multiplying the hourly wage rate for the interval by the typical work year of 2,080 hours. In reporting, the respondent can reference either the hourly or the annual rate, but is instructed to report the hourly rate for part-time workers.

Annual wage: Most of the annual mean wage estimates in this release are calculated by multiplying the mean wage by a "year-round, full-time" hours figure of 2,080 hours per year (52 weeks by 40 hours). Most employees are paid at an hourly rate by their employers and may work less than or more than 40 hours per week. Thus, the annual wage estimates may not represent the actual annual pay received by the employee.

There are a small number of occupations where only an annual wage figure is provided. The workers in these occupations generally work less than the usual 2,080 hours per year. Since the survey does not collect the actual hours worked, the hourly rate cannot be

calculated from the annual wages. For these occupations, therefore, only the annual salary is reported, which has been calculated directly from the data (rather than by multiplying an hourly figure by 2,080 hours). Occupations that typically have a work year of less than 2,080 hours include musical and entertainment occupations, pilots and flight attendants, and teachers.

The *Unemployment Insurance (UI) Address File* is a micro-level employer file prepared quarterly by each State's Employment Security Agency and submitted to the Bureau of Labor Statistics. For 1998, the file from the second quarter of 1997 is used as a sampling frame while the fourth quarter of 1998 is used as a source of population values for employment.

Industry classifications are based on the 1987 *Standard Industrial Classification Manual*, Office of Management and Budget. Industry is classified on the basis of the major product or activity of the establishment, as determined by total sales or receipts of the calendar year prior to classification.

Scope of Survey

The survey included private establishments in Standard Industrial Classification (SIC) codes 07, 10, 12-17, 20-42, 44-65, 67, 70, 72, 73, 75, 76, 78-84, 86, 87, and 89 covering agricultural services, mining, construction, manufacturing, transportation and public utilities, wholesale and retail trade, finance, insurance and real estate, and services. The survey also covered private and government establishments in SIC codes 806, 821, 822, 824, and 829, the Postal Service (SIC 43), as well as all remaining state and local government establishments. Data for the Postal Service are universal counts obtained from the United States Postal Service (USPS). Federal government data are obtained from the Office of Personnel Management (OPM): these data exclude information from selected agencies.

The reference date of the 1998 survey was the week that included October 12, November 12, or December 12 of 1998. The reference date for a particular establishment in this survey is dependent on its two-digit SIC code. See the table below.

Reference Date	Industries Surveyed
October 12	07, 15-17, 41, 46, 50-62, 67, 70, 73, 79, 84
November 12	26-28, 30, 35, 36, 40, 42, 45, 47, 48, 63-65, 75, 76, 78, 80, 81, 83, 86, 87, 89
December 12	10, 12-14, 20-25, 29, 31-34, 37-39, 44, 49, 72, 82, and state and local governments

Sampling Procedures

The sampling frame for this survey was the list of establishments that reported to the state Unemployment Insurance (UI) files for the two-digit SICs listed above. For the 1998 survey, the frame's reference date was the second quarter of 1997. This frame was supplemented with a list supplying establishment information on Railroads (SIC 401).

Establishments in the universe were stratified by Metropolitan Statistical Area (MSA), three-digit SIC, and size of firm (i.e., size class). Size classes were defined as follows:

Size class	Number of employees
1	1 to 4
2	5 to 9
3	10 to 19
4	20 to 49
5	50 to 99
6	100 to 249
7	250 to 499
8	500 to 999
9	1,000 or more

In 1996 and 1997, establishments in size classes 2 to 6 were selected based on a probability sample. The sampling weights in size class 2 were adjusted to account for the employment in size class 1. In 1998, the OES Survey began sampling establishments in size class 1; thus, establishments in all size classes are now represented in the probability sample. UI reporting units with 250 or more employees are sampled with certainty across the three-year cycle of the survey. Approximately one-third of these units is selected within each MSA/SIC/size class each year.

Method of Calculation

Survey schedules were initially mailed to virtually all sampled establishments. Personal visits, however, were made to some of the larger establishments.

Two additional mailings were sent to nonresponding establishments at approximately three-week intervals. Telephone follow-ups and, in some cases, personal visits were made to nonrespondents considered crucial to the survey because of their size.

Response

Subsequent to the closeout date for national estimates, additional data were collected by the states and used to prepare their own estimates. Consequently, the response rates in most states are higher than the response rate used to develop estimates of all-industry wage rates for each MSA.

Estimation Methodology

The OES survey samples approximately 400,000 establishments nationally each year and, over a three-year period, contacts approximately 1.2 million establishments. Each single-year sample represents one-third of both the certainty and non-certainty strata for the full three-year sample plan. While estimates can be made from a single year of data, the OES survey has been designed to produce estimates using the full three years of data. The full

three-year sample allows the production of estimates at finer levels of geography, industry, and occupational detail, while estimates using any one year of data would be subject to a higher sampling error (due to the smaller sample size) and the limitations associated with having only one-third of the certainty units. Producing estimates using the three years of sample data provides significant sampling error reductions (particularly for small geographic areas and occupations); however, it also has some quality limitations in that it requires the adjustment of earlier years' data to the current reference period—a procedure referred to as "wage updating."

The *1996 OES survey estimates*, which were published in December 1997, were from the first year of the new OES wage survey and were developed using only a single year (i.e., 400,000 sample units) of data nationally. The initial estimation methodology used a weighting-class adjustment procedure for nonrespondents and an employment benchmark at the state/industry level. Since multiple years of data were not available for the 1996 estimates, the estimation procedure did not involve "wage updating."

The *1997 OES survey estimates* represent the second year of OES estimates and have been developed using both the 1996 and 1997 surveys. The 1997 estimates also represent the first year of using a "wage updating" methodology in developing the OES survey estimates. In addition to the wage-updating procedure, the 1997 estimates used an improved estimation methodology, utilizing a "nearest neighbor" imputation approach for nonrespondents and applying employment benchmarks at a detailed MSA by three-digit industry and broad size-class level. A variant of the imputation procedure is also used to account for item nonresponse. **Note:** Because of the difference in estimation methods for these first two years of OES estimates, the data from 1997 are not strictly comparable with those published from 1996.

The *1998 OES survey estimates* are developed from the full three years of the OES sample. The combined 1996, 1997, and 1998 data cover approximately 1.2 million sample units nationally. The 1998 estimates use the wage-updating methodology introduced in 1997, which uses the over-the-year, fourth-quarter wage changes from the BLS Employment Cost Index (ECI) to adjust prior years' data before combining them with data from the current year. In addition, the 1998 estimates use the estimation methodology introduced in 1997, which uses a "nearest neighbor" imputation approach for nonrespondents and applies employment benchmarks at a detailed MSA by three-digit industry and broad size class level.

The *wage updating procedure* is used to adjust prior year wages to reflect increases between the previous data and current year data. For wage-updating purposes, BLS has used the national over-the-year wage changes from the fourth quarter of 1996 to the fourth quarter of 1997 and from the fourth quarter of 1997 to the fourth quarter of 1998 for the nine occupational divisions for which ECI estimates are available. These factors are applied to both the 1996 and 1997 survey data to update them to the fourth quarter 1998 level before combining them with the 1998 survey data. Such a procedure assumes that each occupation's wage, as measured in the earlier years, moves according to the average movement of its occupational division and that there are no major geographic or

detailed occupational differences—and this may not be the case. Research is being conducted to develop procedures that may account for differences in the rate of change at more detailed levels than the nine ECI occupational divisions.

The *hot deck (nearest neighbor) imputation procedure* imputes for unit nonresponse. This type of nonresponse occurs when a unit reports no employment data. In hot decking, units in the sample are stratified into year/state/4-digit industry/size class cells. Within each cell, a donor (i.e., responding unit) is selected to represent each nonrespondent under the proviso that a donor cannot be selected twice. The sampling frame employment is used to match donors with nonrespondents. Once a donor and nonrespondent are matched, the occupational employment totals from the donor are copied over to the nonrespondent. In the event that a donor is not available at the year/state/4-digit industry/size class cell level, the procedure advances to succeeding higher level cells until a donor is found.

Occasionally a responding establishment may provide employment information, but omit wage distribution information for selected occupations. The OES survey currently uses a variation of the mean imputation procedure to impute for item nonresponse. This type of nonresponse occurs when a unit reports the total employment for its occupations but not the corresponding employment by wage intervals. In this procedure, units in the sample are stratified into year/MSA/3-digit industry/size class cells. A wage employment distribution is then calculated for those occupations with missing wage employment based on the usable data in the cell. Missing wage employment is imputed using the just calculated wage employment distribution to prorate the total employment of those occupations with missing wage employment.

A separate ratio estimator is used to develop estimates of occupational employment in each wage interval. The auxiliary variable is the population value of total employment obtained from the refined Unemployment Insurance files for the 1998 reference month. Within each MSA, the estimated employment for an occupation at the reported three-digit SIC/wage interval level was calculated by multiplying the weighted employment by its ratio factor. The estimated employment for an occupation at the all-industry level was obtained by summing the occupational interval employment estimate across all industries within an MSA reporting that occupation. A further adjustment to each occupational employment total was made as described in the Reliability of the Estimates section. This adjustment did not affect the mean or median wage rates. The employment and wage data for federal government workers in each occupation were added to the survey derived data.

A *mean wage* and a *median wage* are calculated using wage data from establishments in the industries that reported employment for an occupation.

Mean wage is the estimated total wages for an occupation divided by its weighted survey employment. For the upper open-ended wage interval, a Winsorized mean procedure is used to estimate the mean wage. That is, the mean wage value for the upper open-ended wage interval is set at its lower bound ($60.01). For the other intervals, a mean wage

value was calculated based on occupational wage data collected by the Office of Compensation and Working Conditions. These interval mean wage values are then attributed to all workers reported in the interval. For each occupation, total weighted wages in each interval (i.e., mean wages times weighted employment) are summed across all intervals and divided by the occupation's weighted survey employment to obtain a mean wage.

Median wage is the estimated 50th percentile of the distribution of wages: 50 percent of workers in an occupation earn wages below, and 50 percent earn wages above the median wage. The wage interval containing the mean wage is located using a cumulative frequency count of employment across wage intervals. After the targeted wage interval is identified, the median wage rate is then estimated by a linear interpolation procedure.

Reliability of the Estimates

The occupational wage rates in this report are estimates derived from a sample survey. Two types of errors are possible in an estimate based on a sample survey – sampling error and nonsampling error. Sampling error occurs because the observations are based on a sample, not on the entire population. Nonsampling error is due to response, nonresponse, and operational errors.

Nonsampling errors—Estimates are subject to various response, nonresponse, and operational errors during the survey process. Sources of possible errors are data collection, response, coding, transcription, data editing, nonresponse adjustment, and estimation. These errors would also occur if a complete census were conducted under the same conditions as the sample survey. Explicit measures of their effects are not available. However, it is believed that the important response and operational errors were detected and corrected during the review and validation process.

The employment total and wage data for the occupation reflects only those industries that reported the occupation. This occurs primarily in those industries where the occupation appeared on the survey form. Since every occupation does not appear on every industry-specific form, there may be a bias in the employment and wage data for some occupations. The extent of this bias is unknown.

Another source of potential bias is the limitations placed on the size of the benchmark factors. A benchmark factor is the ratio of a known employment value to a sample-derived employment estimate. This factor is used to make a post-stratification adjustment that makes the total weighted employment estimate at the state/three-digit SIC industry/Metropolitan Statistical Area (MSA)/employment size class level match the population employment at that level. The source of the population employment data is the state's Quarterly Unemployment Insurance files for the reference period of the survey. In cases where a small sample was taken, the ratio factor can become large or small. In order to prevent an establishment from contributing either too much or not enough to an MSA's wage rate estimates, the benchmark factor was not allowed to exceed a predetermined value. The total employment count for those MSAs where the

benchmark factor was limited by this ceiling will be biased to a small degree in those strata. The employment not assigned to those strata because of this ceiling was then distributed across the other MSAs in the state/three-digit industry, so that the estimated employment of the state/three-digit industry would match the known employment totals at that level.

Sampling errors – The particular sample used in this survey is one of a large number of possible samples of the same size that could have been selected using the same sample design. For example, occupational wage rate estimates derived from the different samples will differ from one another. The deviation of a sample estimate from the average of all possible sample estimates is called the sampling error. The standard error of an estimate is a measure of the variation of estimates across all possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples.

Quality Control Measures

Quality control measures implemented in the OES survey include:

- review of the specific occupations to be collected for each industry, and those to be collected in residual categories
- creating and validating the sample frame for all states at BLS-Washington
- allocating and selecting the sample for all states at BLS-Washington
- follow-up solicitations of nonrespondents (especially critical nonrespondents)
- review of survey schedules to verify the accuracy and reasonableness of the reported data
- adjustments of atypical reporting units on the data file
- validation of the nonresponse adjustment factors
- validation of the population employment and ratio factors
- standardized data processing programs and activities

Other Sources of Montana Labor Market Information

In Publications:

The following publications are available, at no charge, from the Department of Labor and Industry's Office of Research and Analysis (see address and phone numbers on title page):

Census of Fatal Occupational Injuries—Includes information on work-related fatalities in Montana and the U.S.

County labor market information flyers—Provide information on largest private employers, employment by industry, employment and unemployment statistics, population, per capita income, local information resources, etc. for Montana counties with larger populations.

Job Projections for Montana's Industries and Occupations—Presents information developed to help people anticipate which industries and occupations are likely to show job growth in the near future, and which are not.

Montana Annual Labor Market Planning Information—Provides labor force characteristics data essential to those involved in planning. Reports how Montana industries fared during the previous year. Presents information on Montana labor force, employment, unemployment, and wages and earnings. Includes job projections by industry and occupation for Montana and the U.S.

Montana Employment and Labor Force Trends—Presents information on statewide and county labor market information. Information is also included on employment by industry, female employment by industry, average hours and earnings, tally of new business firms, and prevailing wage rates for alien certification.

Montana labor market information flyer—Statewide labor market information on largest private employers, employment by industry, employment and unemployment statistics, population, per capita income, etc.

Montana Occupational Injuries and Illnesses—Includes information on work-related injuries and illnesses, including accident rates and frequencies by industry.

Profile of the Montana Worker—A publication of charts and graphs providing a comprehensive profile of Montana and its labor force.

Statistics in Brief—Pocket-sized reference which includes data on employment and unemployment by county, labor force and service delivery areas.

Wage information publications—Include informational wage rates by occupation for Montana as a whole and for Montana's single-county Metropolitan Statistical Areas.

On the State of Montana Electronic Bulletin Board:

Montana labor market information is available on the State of Montana electronic bulletin board at 1-406-444-5648 (from outside Montana) or at 1-800-962-1729 (from inside Montana). A computer and modem are required.

On the Internet:

The Department of Labor and Industry's Office of Research and Analysis places a wide variety of labor market information on the Internet at **http://rad.dli.state.mt.us/**. Listings of job openings and State of Montana job vacancies can be found at the State Job Service's self-directed job search system address on the Internet at **http://jsd.dli.state.mt.us/**. In addition, Montana job openings are published on America's Job Bank on the Internet World Wide Web Network.

We will do our best to provide information in accessible format, on request, in compliance with the Americans with Disabilities Act.

2,000 copies of this public document were published at an estimated cost of $2.57 per copy, for a total cost of $5,140.00, which includes $5,140.00 for printing and $.00 for distribution.

Montana State Library
Records Digitization Project
COVER SHEET

This page is not part of the original document
and was inserted for formatting purposes